

# Railway Age

Vol. 80

April 10, 1926

No. 19

On the Pere Marquette

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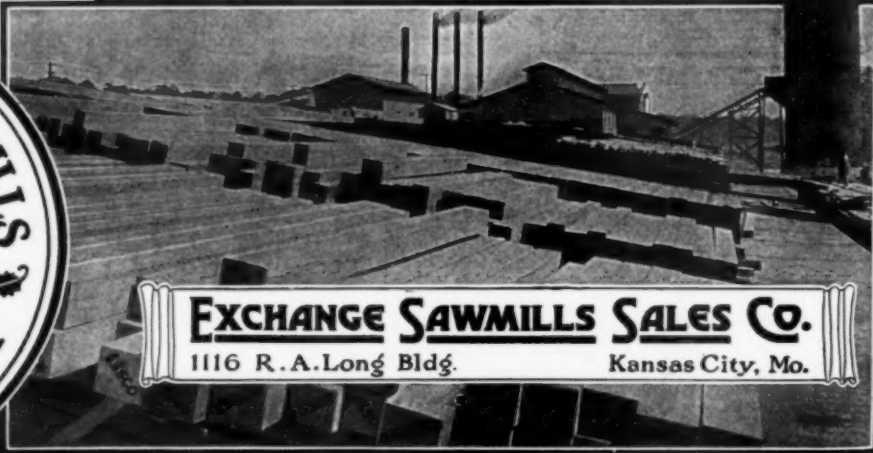

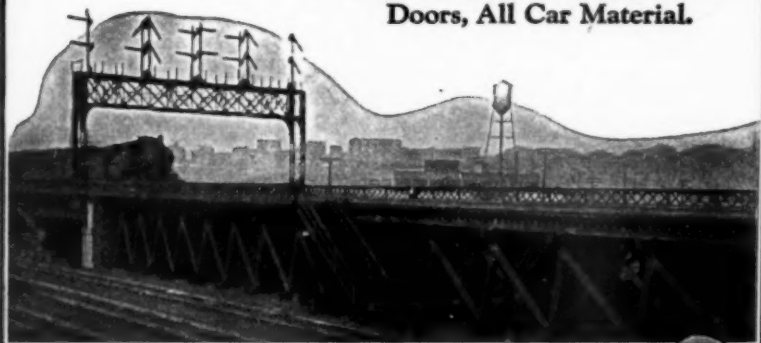
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# Railway Age

Vol. 80, No. 19

April 10, 1926

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Page 5 of Advertising Section

## The Boiler Pitting Problem

**T**HE article in the *Railway Age* of April 3 on the experience of the Great Northern in arresting pitting in locomotive boilers is interesting primarily because it deals with results. Railway officers have been hearing and talking about pitting for a long time. As disclosed in the article on this subject in the issue of February 20, pitting of boiler steel has a record as long as the history of many of the properties suffering from it. That pitting has not persisted without attention being given to its suppression, moreover, is equally true, as would naturally be expected in the case of a trouble like this, which is not only a tax upon the treasury, but with increasing locomotive pressures, etc., is a hazard as well. But the outcome has frequently been disappointing. When the alarms are sounded and the pursuit after boiler pitting begun, it is customary to hear much about clues but little about captures. It is pleasing, therefore, to learn that the Great Northern has secured results in its effort to solve a pitting problem of a difficulty and seriousness as great as in any other territory of like extent. It is not important that the pitting referred to has not yet been completely eliminated, for as long as nails rust, paint peels, ties decay and engines lose more energy than they utilize, there will be room for gratification because substantial progress in pitting elimination is being made. Neither is stress laid upon the disclosure that in meeting the boiler pitting solution on the Montana division the Great Northern has relied for relief upon modified form of water treatment, although this is interesting in view of the ill repute which treating plants have suffered in this connection. The point of greatest importance developed in the Great Northern's experience is that instead of contenting itself with periodic discussions of pitting, this road, on one of its divisions at least, has definitely reduced the damage from this cause. Incidentally, the Great Northern did not overlook colleges in its struggle against corrosion. In view of the facilities which the technical schools afford for investigation in this field, and the extent to which our largest technical industries have relied upon them for aid and guidance in technical research, it appears that their co-operation might well be sought more generally by railroads in the furtherance of pitting elimination.

## Objectives in Hot Box Prevention

**A**N editorial in the *Railway Age* of March 28, 1925, called attention to the fact that some large roads average as many as 500 hot boxes a month in freight service with highly undesirable effects on operation—increased fuel consumption, delayed trains, extra cost for setting out, repairing and picking up cars, and perhaps even more unfortunate in the long run, dissatisfied shippers. It was suggested that a definite objective car mileage between hot boxes be set up on each road, and this idea has been followed in the case of the Kansas

City Southern by the establishment of 100,000 miles per hot box as the goal in its campaign to overcome hot box troubles in freight service. During one month of 1925, the Kansas City Southern came within 5,518 miles of reaching its objective, and judging by the persistence and thoroughness with which this road undertakes to go after operating records of one kind and another, there is more than a fair chance that the goal will be reached during 1926. The question may well be raised whether the railroads in general, through long familiarity with hot boxes in freight service, are not satisfied with a relatively much poorer performance than should be acceptable. Mileages in excess of 1,000,000 per hot box are not unknown in passenger car service, whereas for a day-in and day-out performance in freight service, 50,000 miles per hot box is unusually high. One lubrication authority recently asked a group of car foremen and inspectors the question, "How many of you would be willing to use the dope found in the boxes of the majority of freight cars in your passenger car boxes, give your passenger cars the same attention you give the freight cars, and then stand responsible for the results? I don't believe one of you would, yet the through freight equipment is the money maker for the railroads." More care should be taken to prevent hot boxes in freight service. A performance of 100,000 freight car miles per hot box represents a highly ambitious objective not easily attained under present conditions. It means organization, instruction and constant checks on the forces at original and intermediate terminals, with an unremitting campaign of publicity to show all concerned the desirability of reaching the goal set and the progress being made.

## Proper Basis for Purchasing Machine Tools

**A**S a general rule a railroad management uses either of two methods of appropriating money for machine tool expenditures. The first method is that of budgeting a lump sum to be used by the head of the mechanical department as he sees fit. In this case the mechanical officer knows how much he has to spend each year for machine tools. The second method is that of approving a machine tool expenditure on the basis of the return the investment will bring to the railroad. Where this method is used, as a matter of protecting its interests, the mechanical department furnishes the management with data to sustain its claims that the saving to be effected by each machine justifies its purchase. This condition does not always hold in the case where machines are purchased on the budget plan. The mechanical department knows that it has a certain amount of money to spend and accordingly requests the management to approve the purchase of a list of machine tools, the purchase prices of which will equal the budget allotment. Relying on the judgment of the mechanical department

officer, the management accepts the machine tool lists without supporting data to show that the savings to be effected by the new machines justify the expenditure. Here the responsibility for an adequate return on the investment lies directly with the mechanical department officer. Whether or not he presents such data to the management he should insist that the same careful estimates be made of the investment value of each tool before its purchase is approved under the budget, that the management requires under the other method. However, neither the management nor the mechanical officer should make the error of basing approval of machine tool purchases solely on the direct dollar and cents return which the new tool will bring to the railroad. The job of the mechanical department is to maintain rolling equipment economically and keep it in revenue producing service. A progressive mechanical department should always be studying its shop facilities with the object of finding ways of more quickly repairing locomotives and cars. Such a study, will in many cases, reveal possibilities of speeding up repairs by the purchase of machine tools which may not bring to the railroad the direct net return which the management customarily requires on its capital expenditure, but may increase the earning capacity of the locomotives and cars. A machine tool purchase based on this time factor which means greater revenue earning capacity for the equipment should be just as readily approved by the management as purchases based strictly on the net return to the railroad from the direct savings effected by the new tool.

## Misrepresenting Railway Facts to Employees

THE leaders of the national railway labor unions represent a large part of the employees, and therefore fair and reasonable co-operation between railway officers and the leaders of these unions would be highly beneficial to both railways and employees. It is in recognition of this fact that a majority of railway executives have joined with the leaders of the railway labor unions in supporting the Watson-Parker bill. But the relations between the railways and the employees themselves are far more important than the relations between the railways and the leaders of the labor unions. Therefore, who ever intentionally disseminates among the employees misleading information regarding the results of railway operation and their relationship to wages is trying to sow discord between the railways and their employees that may have serious results for both of them and for the public.

One of the worst examples of misrepresentation of railway facts that have ever come to our attention is an article entitled, "Ability of the Railroads to Pay Increased Wages," which has been written by Frank J. Warne, and for the dissemination of which the officers of the Brotherhood of Railroad Trainmen have made themselves responsible by publishing it in the April issue of their official journal, the "Railroad Trainmen."

The character of this article is well indicated by its first paragraph. "The six years since the close of federal control of the railroads," it says, "have been in many ways the most remarkable and the most prosperous financially to the carrier corporations of the country than any like period in all the nearly one hundred years of steam railroad transportation in America. In consequence the railroads today are in the 'golden era' of their earning power." Every man familiar with the history and statistics of the railways knows that these statements are wholly untrue.

Mr. Warne tries, however, to convince his readers of their truth by stating numerous "facts," and presenting elaborate statistics.

He undertakes first to show that under government control the railways were given guarantees by the government which relieved them of "the financial strain and burden of carrying on their properties during these abnormal years," and that it so maintained the properties and invested new capital in them as to return them to their owners in improved physical condition. He gives statistics regarding the increase in the surplus of the railways under government control as evidence of the improvement in their financial condition.

The settlements made by government officers for under-maintenance under government control indicate to some extent the physical condition in which the properties were returned. The increases in the "surplus" of the railways shown are of no significance. Surplus is merely what the railways have left in each year after paying out all the earnings that they actually pay out. Their earnings may be so poor that they have to reduce their dividends and that many railways become bankrupt, and yet almost invariably a surplus will be shown by the roads as a whole for any given year simply because by control of their total outgo they keep it within their total income.

Having tried to show that the railways were returned from government control in good physical and financial condition, Mr. Warne shows that since 1921 there has been a large increase in their net operating income. To the uninformed and careless reader the statistics presented by him must seem to demonstrate that during the last five years the railways have prospered greatly. Between 1921 and 1925 the net operating income earned by the Class I roads increased from less than \$601,000,000 to almost \$1,137,000,000. Could any evidence of railway prosperity be given to the ignorant and unwary that would be more convincing?

Those who know the facts know however, that the railways did not prosper greatly during the last five years, but that the net returns earned by them during these years were smaller relatively than those ever earned in any preceding five consecutive years in the last quarter of a century, and Mr. Warne, himself, in his article casually gives statistics which to the wary reader afford the refutation to all he tries to show. He refers to the "guaranteed standard return" given the railways under government control. This guaranteed return was based upon the average net operating income actually earned by the railways in the three years ended June 30, 1917. Mr. Warne says "This (guaranteed standard return) was estimated at the time to amount to about \$905,000,000 annually, but by 1924, through certifications by the Interstate Commerce Commission, this sum had increased to more than \$945,546,000."

In other words, Mr. Warne refers to the "unusually prosperous financial condition of the carriers" in 1921, and uses the net operating income earned in that year as a starting point from which to show that since then the railways have enjoyed increasing prosperity; while at the same time he gives figures which show that the average net operating income earned in the three years ended on June 30, 1917, was \$905,000,000, and in 1921 only \$601,000,000, a decline of almost 34 per cent!

The year 1921 was not only not one of "unusually prosperous financial condition of the carriers," but in that year they earned less net operating income than in any other year—excluding years when they received government guarantees—since 1904, and a smaller percentage of return on property investment than in any other year since complete statistics have been compiled. The best available measure of the prosperity of the railways is the percentage



of return earned by them on property investment. An accompanying table shows the net operating income earned in the three years immediately preceding government control and in the five years since 1920 (when the guarantees given under government control were withdrawn) and also the percentages earned on property investment.

In another table presented herewith are given statistics regarding the compensation of employees for the same years. The figures in the two tables show that while in

NET OPERATING INCOME, CLASS I ROADS

Period	Amount per year	Percentage on property investment
Average 3 years ended June 30, 1917....	\$905,000,000	5.2
Average 3 years ended June 30, 1921....	600,937,000	2.91
Average 3 years ended June 30, 1922....	760,187,000	3.64
Average 3 years ended June 30, 1923....	961,955,000	4.42
Average 3 years ended June 30, 1924....	973,871,000	4.32
Average 3 years ended June 30, 1925*....	1,136,984,000	4.83
Average 5 years ended 1925.....	\$886,787,000	4.00

\*Includes switching and terminal companies.

1921 the total net operating income earned by the railways was 34 per cent less than it averaged during the years of the "test period," the total wages paid by them were 97 per cent greater. They show that the average return earned in 1921 for each dollar of capital invested in the railroad industry was 44 per cent less than in the test period, while the average annual wage per employee was almost 90 per cent greater and the average hourly wage about 135 per cent greater than in the test period. They show that during the last five years the average annual net operating income of the railways actually was less than it was in the test period, in spite of a large increase in property investment, while during these years the average

EMPLOYEE'S COMPENSATION, CLASS I RAILWAYS

Period	Amount per year	Average per employee	Average per employee hour
Average 3 years ended June 30, 1917....	\$1,402,000,000	\$880	\$0.283*
Average 3 years ended June 30, 1921....	2,765,000,000	1,666	0.667
Average 3 years ended June 30, 1922....	2,641,000,000	1,623	0.613
Average 3 years ended June 30, 1923....	3,004,000,000	1,617	0.610
Average 3 years ended June 30, 1924....	2,826,000,000	1,614	0.623
Average 3 years ended June 30, 1925....	2,860,000,000	1,638	0.632
Five year average.....	\$2,819,000,000	\$1,631	\$0.628

\*Average for calendar year 1916.

amount of wages paid by them annually was more than 100 per cent greater than in the test period. They show that during these five years the average amount of return earned for each dollar of capital invested in the railroad business was only 4 per cent, or 23 per cent less than in the test period, while the average annual wage received by each railway employee was 85 per cent greater than in the test period and the average hourly wage paid 121 per cent greater. Finally, they show that in 1925 the return earned on each dollar of capital invested in the railroad business was only 4.83 cents, as compared with 5.2 cents in the test period, while the average yearly wage per employee was 86 per cent greater than in the test period and the average hourly earnings more than 123 per cent greater.

How any man with a knowledge of these facts and a semblance of a conscience could start with the year 1921, when the net return earned by the railways was relatively the smallest in history and the wages paid railway employees the highest in history in proportion to the cost of living, and try to mislead railway employees into believing that, because since 1921 the railways have recovered part of their earning capacity, they are in the "golden era" of their earning power and can afford to make a large advance in wages, is inconceivable.

Mr. Warne does not confine himself to statistics regard-

ing net operating income. He also gives statistics regarding net income, dividends, "income to profit and loss," etc., which are correct enough in themselves, but all of which begin with the year 1921, when the entire railroad system of the country was almost bankrupt, and are presented for the plain purpose of flagrantly misleading railway employees and the public.

If the labor leaders think they must resort to such misrepresentation to promote the present wage movement they must consider that they have a very poor case. If this is the kind of "co-operation" the railways are to receive from labor leaders people will continue to cry "Peace! Peace!" in the railroad industry and there will be no peace.

## Illness—a Source of Waste

THE present epidemic of grippe colds and kindred illnesses is presenting a problem to which the managements of some of the railroads in this country could well afford to give considerable attention. The number of absentees due to illness, especially on some of the eastern roads, during the past six weeks has been so large as seriously to effect the work of departments employing a large number of men. One locomotive shop employing approximately 800 men had a total of 150 absentees in one day last month due to illness. Some of the departments were so short-handed that production was practically at a standstill and the shop management was required to make a considerable readjustment of its forces in order to get out any work.

Sickness prevention is a problem equally as important and as possible of ultimate solution as accident prevention. Generally speaking, sickness is a problem of the employee's life away from the job and outside of working hours, and the burden of solution must, therefore, lie chiefly on him. Still, management has a definite and important interest in sickness prevention, because illness is the chief cause of absenteeism. Even in the most favored industrial groups, the time lost on account of sickness per man is not less than five days per year and the average is probably seven or eight days. But, through education of its employees, co-operation with the various health agencies, and by providing sanitary working conditions, the railroads can do a great deal towards the prevention of sickness.

The railroads were among the first large employers of labor to give careful consideration to problems of accident prevention among their employees. Many railroads, however, have failed to adopt methods of medical practice and administration which now find general acceptance among comparable industrial establishments. The medical and surgical staff of a railroad is especially equipped to deal with the railway health problem. The medical officers, acting in an advisory capacity, can influence the policy of the railroads in this connection and indeed have taken active steps to do so. Not only has the Medical and Surgical Section of the American Railway Association recommended codes for the handling and use of water and ice supplies and the sanitation of cars, stations and construction camps, it has also recommended a sanitary code for adoption as standard railway practice, part of which covers sanitation and health in railroad shops and engine terminals. These recommendations, however, have not received universal acceptance by all the railroads, although they were proposed several years ago.

No matter how excellent the mechanical equipment of a railroad may be, the successful administration of the organization is dependent on the physical and mental

health of those who direct and operate it. Health is a matter of urgent and continued importance, both to management and employee. The Medical and Surgical Section, which represents the group judgment of a large number of competent railway surgeons, has made definite recommendations in its sanitary code to solve the problem of absenteeism due to illness. A great deal of the success achieved in accident prevention by the safety department can be attributed to the education of the employee and the medical department should be able to get as good results through educational campaigns on hygiene and sanitation. It is only through the co-operation of the employee in observing the fundamental rules of hygiene and sanitation that the railroads can hope to reduce the waste brought about by illness. "An ounce of prevention is worth a pound of cure."

## Important Litigation Regarding Valuation

**A**N important development in the federal railroad valuation work was the hearing on March 29 and 30, before the federal district court of the Western District of Missouri, of the suit brought by the Kansas City Southern to enjoin the final valuation of its properties made by the Interstate Commerce Commission. This is one of two cases now pending in which the final valuations of the commission are receiving the scrutiny of the courts. The other case is that of the Los Angeles & Salt Lake in the federal court at Los Angeles, decided favorably to the carrier, and now on the way to the Supreme Court.

These cases are similar in form. The carriers seek to enjoin the final valuations on grounds of illegality. The most important ground is that a "rate base" has been determined instead of the actual value of the property. But the carriers also complain because of the commission's failure to comply with other provisions of the Valuation Act and to report such things as an analysis of methods and the original cost of the property. The carriers also complain because the commission has not felt itself bound by the testimony introduced before it, but has felt free to disregard the record made in the hearings. The field of inquiry provided in these cases is so broad that, when decided, they will set important precedents.

What value is, and how it shall be determined, have always been most perplexing questions. The carriers as a whole have taken the position that the "actual value" of the carriers' property should be determined. The carriers' opponents are united on the proposition that a rate base is the thing required by the act. The carriers have objected to a rate base because there are not definite criteria for its determination. Judge Prouty said it meant "what is fair," and the carriers have objected to this indefinite measure, particularly when it has been advocated by radical opponents whose real aim, the carriers have said, was to effect a disregard of property rights which the carriers say the law of the land protects.

The commission has found a rate base. It is hard to say just what its reasoning is, but it is apparent that, in fact, it has employed a formula with which it gets substantially similar results for all roads. Thus, in the hearing at Kansas City, the carrier introduced a tabulation showing that for the first 330 tentative valuations, the commission's Bureau of Valuation treated all of the carriers substantially alike, regardless of their location, efficiency of construction or operation, or earning ability. The formula apparently was to add 5 per cent to the aggregate cost of reproduction, less depreciation, and land values. The final value reported, less working capital, in

most cases seems to be a round figure near the product of the formula.

Of this both the Kansas City Southern and the Salt Lake line complain. They are both roads of substantial earning capacity. The Kansas City Southern protests against the application of the same formula to its property as is applied to the Kansas City, Mexico & Orient, and the Salt Lake line contends that its property should receive a relatively higher valuation than the Western Pacific, for example. They contend that cost and value are not alike; that the value resulting from an investment depends upon the prudence and foresight of the investor; that a railroad is not necessarily worth what you pay for it; and they point to the elements of value due to their superior location and the demand for their services resulting from their location. By analogy they point to the fact that the value of the Blackstone Hotel when built in Hicksville, Kansas, would not equal the value of that hotel built in Chicago. If the Valuation Act requires the determination of what is ordinarily considered as "value," these contentions seem difficult to meet.

When this question was raised before the federal court in the Salt Lake case the commission argued that value need not be found, and defended its method as a determination of a rate base. But apparently in commission circles there is not agreement, because in the Kansas City Southern case it is significant that a different position is taken in the pleadings, the commission contending that it has found the actual and true value of the carrier's property, at least of that property which is at issue in a rate investigation—that is, the property used for carrier purposes. Because of this inconsistency between the two cases, and apparently because of the undesirability of the commission coming to the United States Supreme Court with inconsistent positions, the commission, in the argument at Kansas City, had nothing to say about the determination of value, although this point was the major and important point of the case. The determination of value was not defended against the carrier's argument based, in part, on the precedent of the federal court decision in the Los Angeles, which held the commission's rate base illegal. What the position of the commission will be when it appears before the United States Supreme Court remains to be seen.

A further significant development in the Kansas City Southern hearing is the position taken by the commission with reference to the nature of the valuation hearings now being conducted by its examiners. The administrative difficulties of the valuation work have been found to be tremendous and the commission has found it extremely difficult to provide the hearings required by the Valuation Act. In the case of the Great Northern and the Rock Island systems the records approximated 10,000 pages, and in the Great Northern case the exhibits were about 40,000 pages. The carriers claim that these voluminous records were caused by the insistence of the Bureau of Valuation upon the enforcement of the strict rules of evidence, and say that a large part of these voluminous exhibits were the result of requests made by the Bureau of Valuation for unnecessarily detailed information. However this may be, it is significant that the commission seems aware of the extreme difficulty of concluding these investigations by means of formal hearings, because, in the Kansas City Southern case, it takes a radically new position and seeks to minimize the importance of hearings.

When the carrier directed the court's attention to many issues the commission's determination of which was not based on any facts in the record, the commission took the position that it is not required to base its findings on the facts in the record. This position is, of course, contradicted by the rule declared by the courts as applicable for



all commission hearings. The commission's findings must always be supported by facts in the record. The commission differentiates the valuation proceedings from others on the ground of the peculiar wording of the Valuation Act which is said to require a hearing only of such material as may be offered by the carrier in support of a protest, and does not require the full hearings required by other provisions of the Interstate Commerce Act. A full hearing not being required, the commission may base its determination on any facts or data, whether known to the carrier or not. Among the grounds in support of this contention, the commission argued that the practical administration of the act required the elimination of hearings because of the enormity of the task.

If the court sustains the commission's position, the effect upon the valuation work will be great. If the commission is not bound by facts produced by the carriers in these hearings, the hearings will be relegated to a position of little significance, and the introduction of testimony will be only for the information of the commission but with no necessity for its consideration. And, on the other hand, the carriers then will have a right to a full hearing under all circumstances before the courts, and the burden of trying these valuation issues will be thrown upon the courts of the country.

It has always been recognized by students of administrative activities of regulatory commissions that there is a serious defect in a system where the commission is required to pass judicially on the work of a subordinate agency which is its trusted employee. The commission does not then stand apart from both parties to the controversy. The carriers from the beginning have complained that in the valuation cases tried before the commission they have received little advantage from the hearings, and it has been said that the commission has not, in any important instances, sustained the carriers' contentions against the contentions of its Bureau of Valuation. From that point of view a reorganization in the system of hearings might be a progressive step.

## New Books

*Hand Book of the Railway Fire Protection Association.* 312 pages. 5 in. x 7 1/4 in. Published by the Association, R. R. Hackett, secretary, Room 1207, B. & O. R. R. Building, Baltimore, Md. Price \$1.

The character of this book is well described on the title page: "Hand Book of recommendations and suggestions for the protection of railroad property and prevention of fire losses therein. For the use of railroad officials, railroad fire inspectors and fire marshals, superintendents, engineers, architects, master mechanics and agents and all employees in charge of railroad property."

Readers who have followed the reports of the annual meetings of this association in the columns of the *Railway Age* need not be told that the discussions are always of the most practical and interesting character and always elaborated to the point of covering each subject with great thoroughness. The fire protection engineers have high ideals of their duties and of the scope of their profession and they act up to their ideals to an unusual degree. The wisdom developed in the doings of a dozen or more of these fruitful conventions is condensed into the 300 pages of this book. The table of contents constitutes a luminous catalogue of varied fire dangers classed under five general heads: common fire hazards, special fire hazards, transportation hazards, special occupancies or risks and fire protection.

Embodied in the book are various useful data taken

from the publications of the National Fire Protection Association and the National Board of Fire Underwriters. The index fills 16 pages. The book is bound in loose leaf fashion with a view to facilitating the addition of leaves, year by year, as new subjects or changes are adopted at the annual meetings of the association.

## Books and Articles of Special Interest to Railroaders

(Compiled by Elizabeth Cullen, Reference Librarian,  
Bureau of Railway Economics, Washington, D. C.)

### Books and Pamphlets

*Annual Bulletin 1925*, by Car Service Division, American Railway Association. Charts, maps and text on car supply and related economic and transportation factors in 1925. 44 p. Published by Car Service Division, American Railway Association, Washington, D. C.

*Engineering and Transportation*, by Samuel Rea. Lecture before Princeton School of Engineering in the Cyrus Fogg Brackett Course of Lecture on contribution of engineering to transportation development, with special reference to the Pennsylvania System. 35 p. Published by Pennsylvania Railroad, Philadelphia, Pa. Apply.

*Lumber—Revised Simplified Practice, Recommendation No. 16*, by United States Bureau of Standards, Department of Commerce. Softwood lumber standards as accepted by associations, societies and groups, listed on pages 1-2, including 11 railroads. 87 p. Published by Government Printing Office, Washington, D. C. 15 cents.

*Motor-Bus Transportation. Part I—Europe*, by H. G. Schuette. Study based on reports of 22 consular officers and foreign representatives of Department of State and Department of Commerce. Trade Information Bulletin No. 393, United States Department of Commerce. 49 p. Published by Government Printing Office, Washington, D. C. 10 cents.

*To Regulate Interstate Commerce by Motor Vehicles Operating as Common Carriers on the Public Highways.* Part I of the hearings before Committee on Interstate Commerce, United States Senate, on S. 1734. March 22-26, 1926. 195 p. Published by Government Printing Office, Washington, D. C. Apply to committee.

### Periodical Articles

*How Many Trains Are Enough?*, by Robert S. Henry. New attitude towards competitive services between cities. *Nation's Business*, April, 1926, p. 74-75.

*Legislation Based on Collective Bargaining*, by D. B. Robertson. Purpose of Watson-Parker bill. *American Federationist*, March, 1926, p. 317-323.

*Some Interesting Features of the Spanish Northern Electrification*, by L. B. Rogers. Illustrations and charts. *General Electric Review*, April, 1926, p. 249-256.

*The Statistical Allocation of Joint Costs*, by W. L. Crum. Separation of railroad joint costs between freight and passenger service by process of multiple correlation. With discussion, p. 25-26, by M. O. Lorenz. *Journal of the American Statistical Association*, March, 1926, p. 9-24.

*Theory of Rail Consolidations*, by John Balch Blood. *Savings Bank Journal*, April, 1926, p. 18-20.

THE NUMBER of freight cars moving through Altoona, Pa., on the Pennsylvania Railroad on February 1, was 9,698, the largest on record and the daily average number passing through Altoona for the month of February was 7,939. The highest preceding monthly record was 7,616 cars in April, 1916. A new record of eastbound freight trains arriving at Altoona was made on February 2, when the total was 117; and the highest record for loaded cars, eastbound, arriving in one day was made on the 7th of February, 5,101 cars.

## Letters to the Editor

[The RAILWAY AGE welcomes letters from its readers and especially those containing constructive suggestions for improvements in the railway field. Short letters—about 250 words—are particularly appreciated. The editors do not hold themselves responsible for facts or opinions expressed.]

### Railway Age Improves Geography

ST. ALBANS, VT.

TO THE EDITOR:

If, as the enclosed map [of Delaware & Hudson in *Railway Age* of April 3, 1926, page 967,] indicates, the state of Vermont has taken over the territory of New Hampshire, and the state of New Hampshire has taken over the territory of Maine, we may expect to find the state of Maine anchored somewhere off the Atlantic coast.

H. H. POWERS,  
Attorney, Central Vermont.

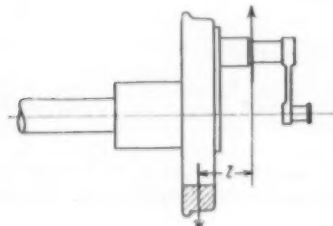
### Counterbalancing Heavy Locomotives

PHILADELPHIA, Pa.

TO THE EDITOR:

The Master Mechanics' committee on counterbalance of 1915 said as follows:

"Cross-counterbalancing to correct the disturbances caused by the parts revolving in different planes is thought to be unnecessary with outside cylinders, because of the disturbing forces being slight when compared to the principal reciprocating and centrifugal forces.



The above statement was not the unanimous opinion of this committee. Eleven years have passed since 1915, and what was true then is

even more true now; namely, that our big present-day power is badly balanced, some of it very badly, and this power is hard, both on itself and on the rail. To consider two types of locomotives as examples, the large Santa Fe type engine is difficult to balance at all, even incorrectly; the Mountain type engine can be balanced, but it is not balanced correctly on any two-cylinder locomotives now running in America.

The writer does not wish to go into any abstruse mathematical discussion of the subject. The underlying principles involved are simple to understand, and they will be stated here briefly, so as to bring this matter forward again for thought and consideration.

Take the reciprocating parts of a two-cylinder locomotive. The late D. L. Barnes, in analyzing the counterbalancing of the reciprocating parts, said: "The best way to counterbalance these parts is to keep them so light that it then makes little difference how much or how little we balance." This statement is a fundamental truth. The modern form of this same truth as formulated by this same Master Mechanics' committee of 1915, reads: "Keep

the reciprocating parts on one side of the engine down to 1/160 of the total weight of the locomotive, then balance one-half of this amount." A further statement was made that it would be better if the weight could be kept down to 1/200 or better. On the present day big power, where the operation of heavy freight and fast freight is ever on fast running schedules, it is absolutely necessary to keep the reciprocating parts down to 1/200.

By careful design and the use of the proper materials, this can be done. It was done 12 years ago on one lot of large Santa Fe type locomotives. The reciprocating balance weight that is finally put in the wheels will always exert an unbalanced force. This cannot be avoided, but there is no reason why we should go on balancing the revolving weights incorrectly. Take the main wheel of a large locomotive. The plane of the revolving weights and the counterbalance weight nowadays are greatly out of line by an amount  $l$  shown in the illustration. The revolving weights are now so heavy and the distance  $l$  has become so much greater that the revolving weights supposedly balanced are now badly out of balance.

It would seem that the next period of development of the steam locomotive will be along the line of the refinement of the design. This is going to take place in different individual parts of the present-day locomotive.

In regard to counterbalance, the following should be considered:

1—Very careful design of the reciprocating and revolving parts, the correct choice of materials and the very greatest care in fabricating these materials will make it possible to keep the weight of these parts down to 1/200, or better, of the weight of the locomotive.

2—Carefully consider the balancing of the revolving weights, especially in the main wheel, and balance these parts correctly. So far, to the writer's knowledge, this cross-balancing of the revolving weights has been done here in America on only one locomotive, a Santa Fe type, in 1924, and with markedly good results.

H. A. F. CAMPBELL,

Assistant to the consulting vice-president, Baldwin Locomotive Works.

### The Trouble with the College Man in Railroad Work

EVANSVILLE, Ind.

TO THE EDITOR:

May I answer the communication by T. U. C. K. which appeared in the *Railway Age* of March 27, 1926, page 891.

The trouble with the average college man of today is that he wants to start his career as a bank president or a railroad superintendent, instead of beginning at the bottom and working up. If a man really desires to accomplish his ambitions in a certain field he should disregard his wonderful dreams of "contentment" and "satisfaction" and diligently apply himself to his task, whatever it may be, regardless of his intellectual ability. Fidelity and application are essential factors to success in any occupation, and most employers will take notice of any extra exertion on the part of their employees.

This "scale of responsibility" can be attained only through persistent efforts and practical experience. Recognition will come to those who prove themselves more capable than the other fellows. I suggest that you either condescend, or start a railroad of your own and apply your seemingly most efficient system of engineering, since no other railroad is so far advanced.

JOHN H. FISH.





Composite View of Modern Steam Boiler Plant; Fire Department Building, also Containing Shop Men's Assembly Hall; and Boiler and Machine Shops from South End

## Santa Fe Completes Reconstruction of Coast Line Shops

*Locomotive repair plant at San Bernardino is rebuilt on enlarged scale and fully equipped with the latest labor-saving machinery*

THE Atchison, Topeka & Santa Fe is now completing the enlargement of its locomotive repair plant at San Bernardino, Cal., the second shop on the system to be extended in recent years and provided with modern equipment throughout.\* The major part of the extension to the locomotive department at San Bernardino was begun in 1922, and will be completed this year. The program included remodeling and extending the existing machine shop and store house, and also the construction of a new boiler shop, blacksmith shop, pipe, tin and welding shop, and power plant, together with the auxiliary facilities such as flue shop, sheet metal storage building, fire department and assembly hall, apprentice school, emergency hospital, offices and lavatories.

The new locomotive shops, which occupy the site of the old shops established in 1887, are located centrally with respect to the distribution of locomotives on the Atchison, Topeka & Santa Fe Coast Lines. They handle general and heavy repairs to all locomotives on the Coast Lines, the greater proportion of which are heavy freight and passenger power such as Santa Fe type freight engines and Pacific and Mountain type passenger engines. In addition, the shops will make light and running repairs on engines operating out of this terminal, these repairs being quite extensive on account of the mountainous district in which the engines operate. The shops will also handle much of the driving wheel and tire work and flue safe ending for several other enginehouse terminals on the Coast Lines.

\*The first of the system shops to be enlarged were those at Albuquerque, N. M., where the improvements, begun in 1915, were held up during the war and completed in 1922. This plant was described in the *Railway Age* of August 5, 1922, page 237.

### General Layout of Shops

The new plant, in addition to the locomotive department, includes a 43-stall enginehouse with the usual terminal facilities as well as a repair plant having a shop capacity of 315 freight cars and 30 passenger cars.

Most of the car department facilities were built in 1917 to replace shops destroyed by fire during that year, and are comparatively modern, with a well-equipped planing mill, dry kiln, wheel shop and steel car plant. This shop repairs a large number of the refrigerator cars used in the western fruit traffic. The entire locomotive and car shop layout occupies a site paralleling the transportation yards and opposite the passenger station. It is 3,600 ft. in length by 800 ft. in width, comprising about 66 acres.

As will be noted from the general yard plan, the new locomotive machine and boiler shops are both of the transverse type and contain 30 pits and 29 pits respectively. Both of these buildings face a transfer table 65 ft. in length which handles locomotives to and from any one of the 59 pits leading to the table and also conveys material for a number of service tracks leading to it.

Another transfer table 120 ft. in length, built by Geo. P. Nichols & Bro., is situated 260 ft. east of the boiler shop. This table is of sufficient length to accommodate the largest locomotive with its tender and also the "shop goat" (saddle tank switching engine). Locomotives usually enter and leave the shops by means of this transfer table and the tracks connecting it with the engine storage yards, although there is another connection from the engine house to the 65-ft. transfer table.

Locomotives to be repaired are run on the 120-ft. transfer table with their tenders. After setting an engine at

one of the stripping pits, Nos. 24, 25 or 27 in the boiler shop, the tender is placed on one of the several storage tracks between the boiler shop and the transfer table. Here the fuel oil (all engines in this territory are oil burners) and water tanks are drained and cleaned before the tender enters the boiler shop on one of the tracks leading into it.

The locomotive after being stripped is set on a pit in the boiler shop or sent directly to the machine shop, depending upon the repairs necessary. When all repairs have been completed the engine is moved to the "firing up pits," Nos. 28 and 29 in the boiler shop, and the tender run up and connected, after which the complete locomotive is taken out on the 120-ft. transfer table.

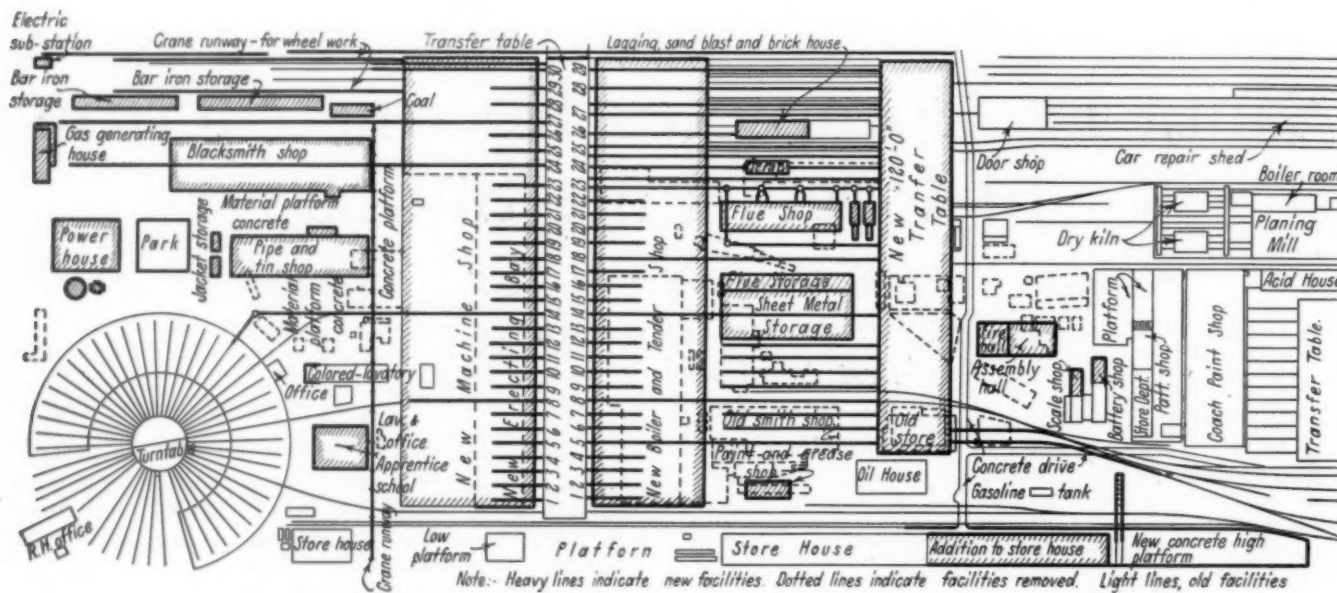
Among the considerations which influenced the location and arrangement of the boiler shop was that of its possible use to supplement the existing facilities for steel passenger and freight car repairs. Many of the repair tracks of the car department lead to the 120-ft. transfer table so that steel cars can be easily switched into the boiler shop. Back of the boiler shop are located the building for the flue

struction of the other auxiliary buildings offered no interference with the operation of the shop.

#### Grade and Soil Conditions of Site

The original grade of the ground for the site of the shops was nearly level but ascended slightly toward the northwest which necessitated some excavation at this point and a concrete retaining wall averaging 12 ft. high for a distance of 500 ft. along the west property line and 800 ft. along the north line.

The soil is of sandy loam with a subsoil of sand and gravel approaching quicksand conditions in certain places. Soundings taken to the depth of 40 ft. did not encounter rock. Therefore pile foundations were provided to support the heavier loads. The ground water level is normally not more than 6 ft. below the surface, and during the winter rises to 3 ft. This is caused in part by the subsoil drainage from a large area of land adjacent to the shops which has long been under irrigation. These soil conditions caused a great deal of trouble in excavating foundations for buildings and machinery. This soil will



Plan of Santa Fe Coast Lines Shops at San Bernardino, Cal., as Reconstructed

shop, plate metal and flue storage, boiler lagging reclamation and storage for paints and oils. In the rear of the machine shop is a material platform 43 ft. 6 in. in width extending the entire length of the shop and provided with a 15-ton electric traveling crane. Facing this platform is the blacksmith shop and pipe, tin and welding shop, while a little further removed is the power plant.

Since the new locomotive shops had to occupy the site of the old shops it was necessary to map out a program for carrying on the improvements without serious interference with the usual shop operation. Agreeable with such a program, the construction was begun in 1922 by the installation of a new blacksmith shop on a clear site between the machine shop and the engine house. This was followed by the building of the new pipe, tin, and welding shop, and later the power plant. When these departments were moved into their new facilities the old buildings they occupied were razed, thus clearing the sites for the north half of the new boiler shop, the 120-ft. transfer table, and the other new buildings adjacent thereto. The work of remodeling the machine shop was begun by adding seven new panels at the north end of the old shop, and then remodeling the old shop in two stages. The con-

not carry away much storm water, consequently an extensive system of storm sewers and open drains had to be laid.

#### The Machine Shop an Important Unit

The most important building in the locomotive repair plant is the machine shop, 673 ft. in length and 201 ft. in width between centers of building columns. The length is divided into 30 panels, all of which are 22 ft. center to center of columns with the exception of the two end panels which have widths of 24 ft. and 31 ft. respectively. The width is made up of 3 bays, a 90-ft. erecting bay next to the transfer table, a light machine bay of 46 ft. and a heavy machine bay of 65 ft.

The original machine shop, built in 1907, was a steel-frame structure with brick walls. Before the recent improvements were undertaken it contained two bays, the erecting bay 74 ft. in width with two 15-ton traveling cranes, and a machine bay 46 ft. wide. The length of the building was 510 ft., being made up of 23 panels. In the remodeling, the steel from the erecting bay was removed (to serve as a machine bay in the boiler shop) and replaced by a 90-ft. erecting bay. In addition the entire



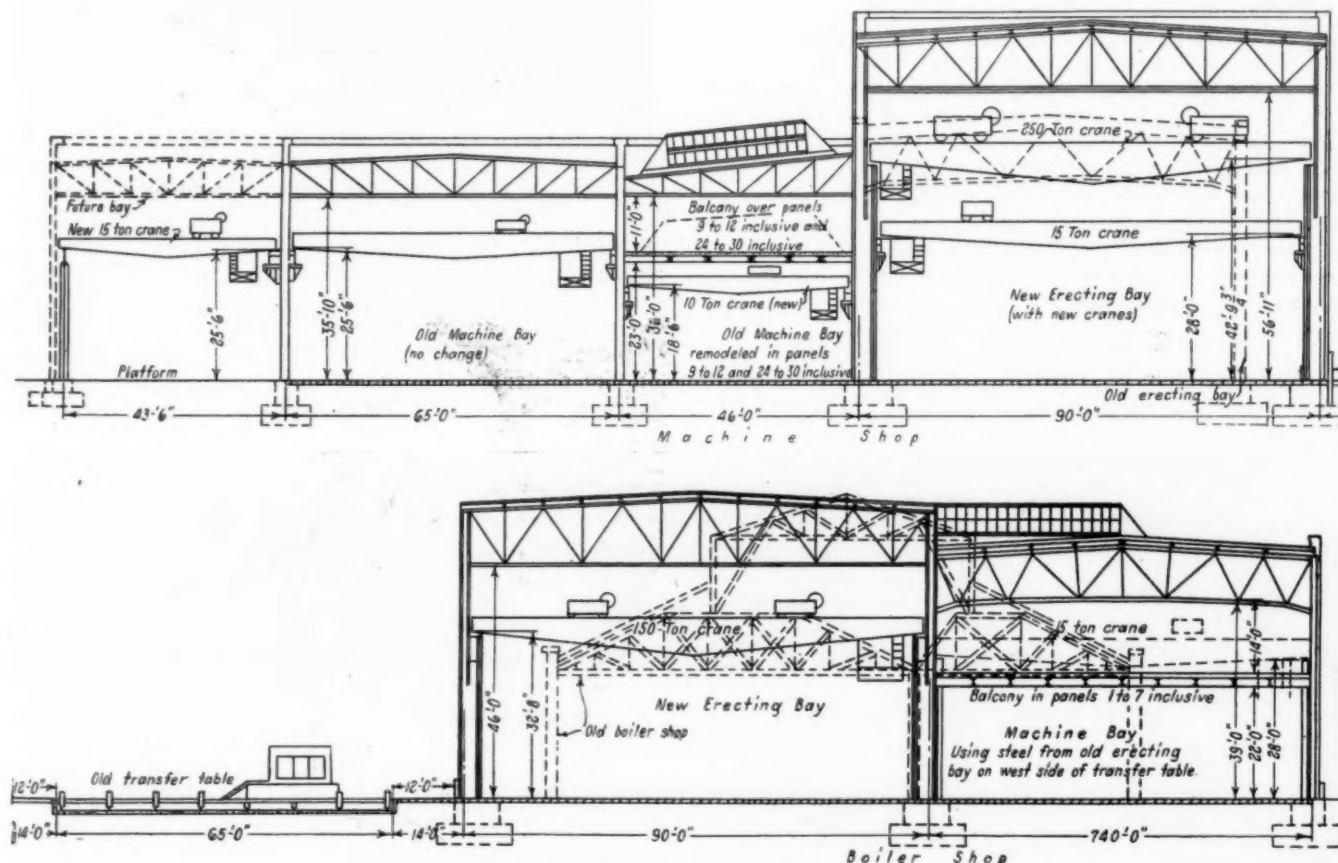
shop was extended 7 panels beyond its former north end. All of the old pits were removed and new concrete pits 63 ft. long were installed. In height this bay is 56 ft. 11 in. to the bottom of the steel roof trusses. It is served by three Shaw cranes furnished by Manning, Maxwell & Moore, Inc., one of 250 tons capacity, and two of 15 tons capacity each, the light cranes operating on a runway underneath that provided for the heavy crane.

The original light machine bay with a roof truss height of 18 ft. 6 in. was retained, but in the seven new panels added, this bay was given a roof truss height of 36 ft. to allow for a future balcony.

The heavy machine bay was built in 1921, in anticipation of the present program. In the seven-panel extension of the new shop this bay is constructed exactly as in the old building. The heavy machine bay is served by two cranes of 15-tons capacity each. These cranes not

wheel gang under the crane runway and in the machine shop adjacent to it.

The entire machine shop building is framed of structural steel furnished by the American Bridge Company, 1,200 tons of steel being required. The columns for the erecting bay rest on concrete foundations with pile footings. The outside footings are 9 ft. by 15 ft., with 15 piles, while the center columns have bases 12 ft. by 15 ft. and 20 piles. The walls of the building are of concrete, and steel sash of the Truscon and Fenestra makes is used liberally. The roof is of laminated, slow-burning construction made up of 2-in. by 3-in. sticks surfaced on all sides, nailed to 3-in. by 6-in. purlins and covered by composition roofing furnished by the Johns-Manville Company. The floor is of 3-in. Kreolite wood blocks laid on a 6-in. concrete slab which is reinforced by 6-in. by 6-in. No. 10 by 10 Clinton wire mesh. The building as a whole



Cross Section Through New Locomotive Shop Facilities of the Atchison, Topeka & Santa Fe, Located at San Bernardino, Cal.

only operate over the machinery but also out the ends of the building over the storehouse platform at one end, and the service tracks at the other end. Swinging doors to let the cranes in or out are arranged in the building wall. The doors are raised and lowered by an electric motor-driven hoist.

Outside of the west wall of the machine shop is the material platform 43 ft. 6 in. in width which is also served by a 15-ton overhead crane. The steel for the crane runway is designed so that it may be incorporated in the frame for a new bay to be erected in the place occupied by the material platform if required.

Extending at right angles to this material platform and at the extreme north end of the shop is another material platform 40 ft. wide and 440 ft. long, also equipped with a 15-ton crane. This latter platform is used for the storage of driving wheels, tires, and axles, and serves the

is not heated but steam heat is supplied to the offices and at some special machine locations.

The piping mains for water, high pressure steam, air, welding gas, and drinking water are all carried overhead on brackets above the crane with drops down the columns. The water, steam and air extensions to the pits are carried in a shallow trench under the floor to recesses in the locomotive pits.

Near the center of the shop is located the office for the gang foreman, the blueprint room, and the substore room; the partitions of these rooms are made of steel plates with Truscon sash. The air room is of the same construction, located in the south end of the shop.

The machinery is driven both by individual motors and by belts in groups. In the latter case, the groups are situated for the most part in the light machine bay, so placed that no motor of greater than 50 hp. drives any one

group of machines. In order to drive the belt-driven machines located in the heavy machine bay, it was necessary to provide brackets for countershafts extending out six feet from the columns to reach over these machine tools. However, the greater part of the machines in this bay are provided with individual motor drive. The machines are grouped similar to those in the Albuquerque shop; that is, each sub-division of the machine shop has in it the machine tools required for the work at that point. For example: Beginning with the north end of the shop, the space assigned to the wheel gang is equipped with wheel lathes, tire mills and quartering machines, while adjoining is the space assigned to the driving box gang with its boring mills, planers, draw-cut shapers, presses, etc. Further down the shop suitable areas have been assigned to the main and side rod gang, the guides and piston gang, and the valves and valve motion gang, each having near at hand the machine tools needed for each individual job.

Liberal use is made of bracket and jib cranes over the machines. Even in the heavy machine bay the workmen need not wait for the electric traveling crane, for suitable bracket and jib cranes have been installed at all heavy machine tools. These vary in capacity from  $\frac{1}{2}$  ton to 5 tons, but most of them are of  $1\frac{1}{2}$  tons capacity. These cranes are nearly all equipped with geared trolleys and hoists of Chisholm & Moore make, and with geared motor air hoists of either the Chicago Pneumatic Tool or the Independent Pneumatic Tool make. There are 56 such cranes in the entire shop.

#### Boiler Shop Served by 175-Ton Crane

The boiler shop in general appearance and construction is similar to the machine shop, being of the same length

The steel from the old machine shop erecting bay was used for the machine bay in the new boiler shop for a length of 23 panels, the remaining panels being of new steel. At the south end of the machine bay for a distance of 156 ft. a balcony has been provided for the electrical repair shop, and for toilet and lavatory facilities. Be-



Transfer Table Between Machine and Boiler Shops with Heavy Mountain Type Locomotive on the Table

neath the balcony is the carpenter shop and the motor car repair shop. The remainder of the space in the machine bay is available for boiler shop machinery and is served by a 15-ton capacity electric traveling crane as well as numerous post and bracket cranes with geared air hoists. In the center of this machine bay is the tool foreman's office and storeroom for templates. These rooms are



Machine Shop Erecting Bay Served by 250-Ton Crane

(673 ft.) and divided into 29 panels, 23 of which are 22 ft. center to center of columns; one panel is 24 ft., three are 26 ft. 4 in., and two are 31 ft. The boiler shop is 164 ft. wide, being made up of two bays, the erecting bay 90 ft. wide, and the machine bay 74 ft. wide. The erecting bay has only one crane runway and is served by a crane of 175 tons capacity with the auxiliary hooks of 15 tons capacity. The height to the bottom of the roof trusses is 46 ft.

made up of sheet steel with Truscon steel sash similar to that in the machine shop.

The south end of the boiler shop is devoted to work on locomotive tenders and at this end seven panels have been provided with concrete pits similar to those in the machine shop. The remainder of the erecting bay is for boiler work and contains no pits. As previously mentioned the six north panels of the boiler shop are set aside for stripping and firing up. In these panels are three stripping



pits, each 140 ft. in length with service tracks between the pits. Four lye vats 10 ft. by 20 ft. by 4 ft. deep are situated in this end of the shop. Each vat is not only served by the electric traveling cranes of the erecting bay and heavy machine bay, but by bracket cranes and air hoists as well.

The "firing up pits," at the extreme north end, are of the same general construction as the stripping pits. They are separated from the remainder of the shop by a con-



Well-Lighted Boiler Shop Machine Bay

crete wall. The building is left open at the front and rear of these pits, and louvers are provided in the roof so that smoke will be easily carried up and out of the shop. Swinging doors similar to those in the machine shop are put in the wall between the firing up pits and the boiler shop so that the 15-ton crane of the machine bay can be

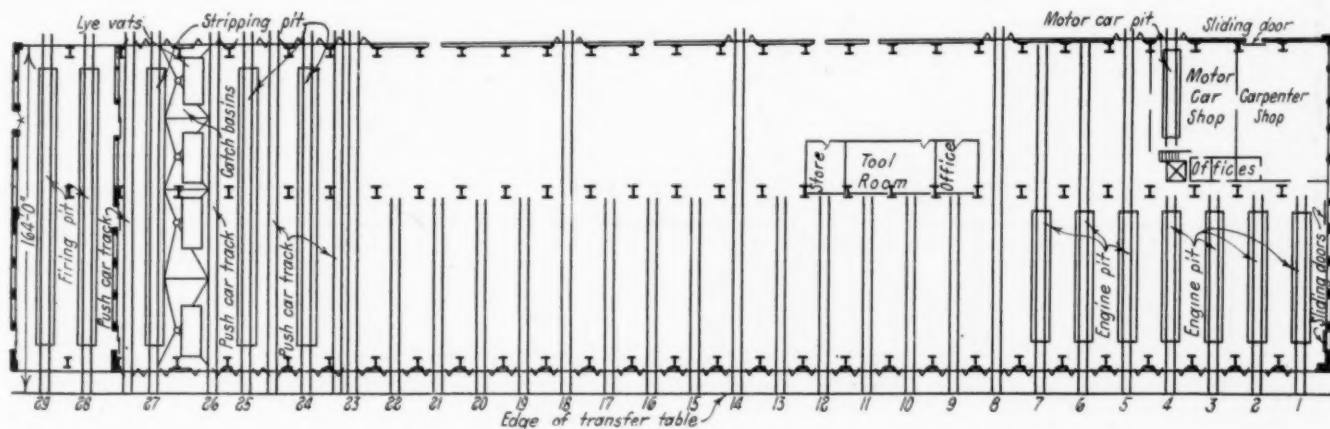
The flue shop building, 180 ft. long by 45 ft. in width, is of structural steel framing. The walls are of Johns-Manville corrugated transite siding with steel sash for window openings.

There are three sets of flue welding machines, two sets working on 2¼-in. boiler tubes and one set on super-heater flues. Of the two sets operating on 2¼-in. tubes, one set uses the electric welding process. The electric welder was furnished by the Thompson Electric Welding Company, and the auxiliary equipment including grinders, rollers, and swedges were made up by the railway company from its own patterns. The other set operating on 2¼-in. tubes uses oil-fired furnaces, furnished by Joseph T. Ryerson & Sons, and a Hartz welder. The swedges are of the Ryerson design. The flue testing and cutting off machinery is supplied by the railway company from its standard patterns, except one automatic flue safe end cutting off machine furnished by Ryerson.

The flue machinery and push car tracks are so arranged that flues to be safe ended can enter the shop and pass through any one of the groups of machines and out of the shop without interfering with the work in any of the other groups.

A rather novel development has been made in connection with the flue rattling. There are two rattlers both of the Baird type. These rattlers are enclosed in a frame building covered with Johns-Manville corrugated transite siding similar to the flue shop. This building is constructed with inner and outer walls, having a space of 8 in. between the walls which is packed with scrap hair felt insulation such as used in refrigerator cars. The doors to the rattler house are constructed and insulated similar to refrigerator doors. By this construction the usual noise of the dry-type rattler is so muffled that with both rattlers in operation they can scarcely be heard above the usual noises about the shops.

Another important adjunct to the boiler shop is the sheet metal and flue storage building, a structure 193 ft. 6 in. by 101 ft. 8 in. The portion devoted to boiler steel is 74 ft. in width served by one of the 7½-ton electric



Floor Plan Layout of Boiler Shop

run out over the firing up pits. These firing up pits are also provided with a fuel oil crane and a water crane for supplying oil and water to tenders.

#### Flue Shop—Rattler Building Sound Insulated

One of the most important auxiliary buildings in connection with the boiler shop is the flue shop. This is located immediately back of the boiler shop, and connected to it by service tracks. There is also a "run around service track" so arranged that flues can be handled through the boiler shop from the machine shop and roundhouse.

traveling cranes formerly used in the erecting bay of the old machine shop. The steel plates stored in this building are placed on edge between rails imbedded in concrete footings. An unloading track from the 120-ft. transfer table runs through the center of the building and into the boiler shop.

A lean-to, 28 ft. in width, extends the entire length of the building which is divided into racks for storing new flues or flues which have been repaired and held awaiting application to the engines in the shop. The flues are placed in these racks from an unloading track immediately

outside the building. The building is of steel framing, covered with galvanized corrugated iron.

Near the tender repair department of the boiler shop is a building 80 ft. by 26 ft., built of monolithic concrete containing facilities for reclaiming oil from old waste and reworking waste not only for the tender shop, but for the car department. This waste room also has presses for forming grease used in locomotive driving box cellars and rod cups.

In the end of the building nearest to the tender shop is a paint mixing and storage room, supplied with the necessary equipment for storing and mixing paint used in the locomotive department. By placing these facilities in a separate building much of the fire hazard is removed from the main shop building.

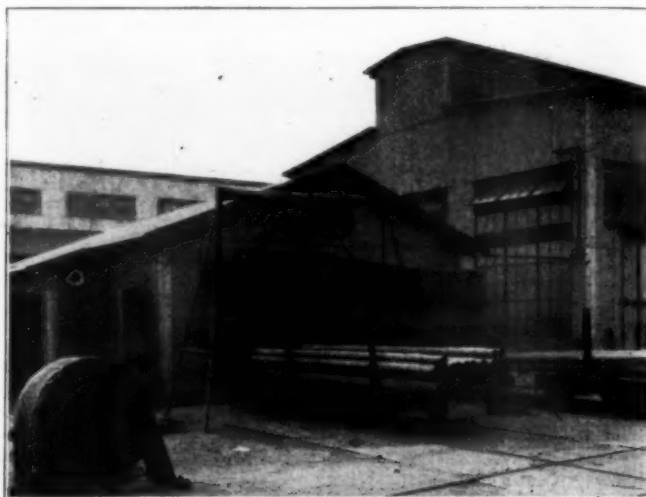
There is also now being constructed adjacent to the stripping pit a concrete building to be used for reclaiming magnesia lagging, also for storing reclaimed and new lagging, and in addition a shed for the storage and sorting of fire brick.

#### Blacksmith Shop Well Equipped

The blacksmith shop is a steel frame structure 306 ft. 10 in. in length by 80 ft. in width. The walls are almost entirely of glass in steel sash, at least 50 per cent of the area having hinged sash to allow free circulation of air. There is also a monitor 20 ft. wide and 8 ft. high on the roof, the sides of which are provided with louvers. The roof trusses which span the full width of the building afford a clear height of 22 ft. above the floors. The roof is of laminated wood construction of the slow burning type similar to that of the machine and boiler shop, and the floor is of cinders. A concrete roadway 6 ft. wide runs through the center of the building, and there is a similar roadway crosswise of the building near the center. These

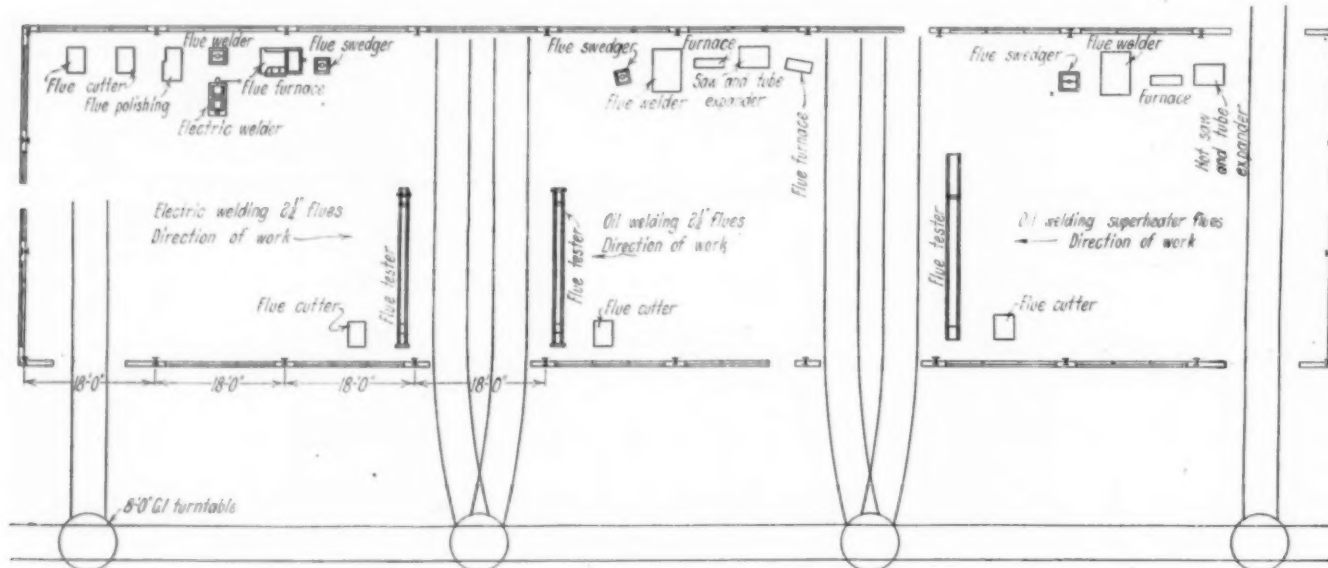
A bolt shop, located in the end of the blacksmith shop nearest the machine shop, is equipped with bolt cutters both for machine bolts and staybolts. After being forged the bolts are passed to this shop for threading and are there stored in bins until called for by the machine or boiler shop.

About 50 ft. from the blacksmith shop, paralleling it,



Flue Rattler Building—Also Showing End of Flue Shop Building

are sheds for storage of bar iron and bins for blacksmith coal. These bar iron sheds are 24 ft. in width and have a total length of 300 ft. Racks of scrap rail have been built up under the sheds for holding the bar iron.



Layout of Machinery and Tracks in New Flue Shop, Constructed in Three Units

roadways are used for handling material in the shop trucks.

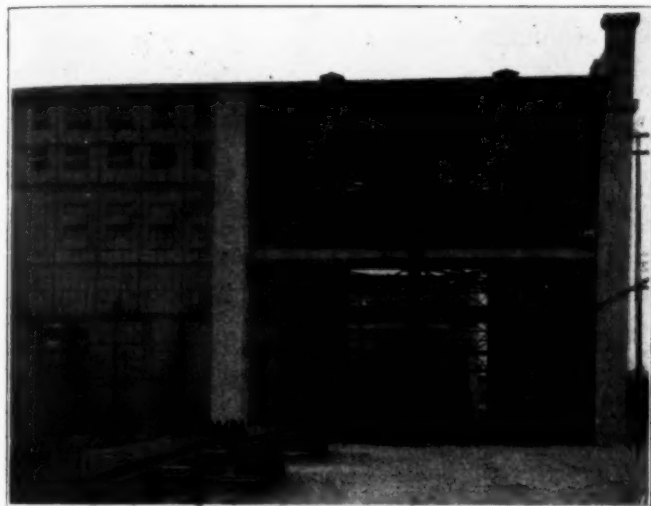
The shop is equipped to do heavy and light forging work as well as machine forging. The hammer equipment consists of one 4,000-lb. steam hammer, three 1,500-lb. hammers, one 1,100-lb. and one 250-lb. hammer, together with one 2,000-lb. single frame steam hammer. The forging machine equipment consists of one 4-in. and two 2½-in. machines. Blast is supplied to all forges and furnaces by means of an overhead blast line, a pressure of 15 ounces being maintained by two No. 7 motor-driven blowers.

Ample provision was made for the pipe and tin work, brass and babbitt work, and for electric and gas welding, all of which are taken care of in the same building. This building measures 213 ft. 6 in. in length by 67 ft. 3 in. in width. The framing is entirely of steel with a clear roof span, the bottom chord of the roof truss being 18 ft. above the floor. For the walls, steel sash are used entirely except for a distance of 4 ft. above the floor. The floor is of concrete and the roof of laminated wood construction similar to that of the other shop buildings.

Along the north wall is an office for the foremen and a



small tool and material room. This tool and material room also supplies the blacksmith shop immediately to the north. In the end of the building nearest the roundhouse a room is partitioned off for use as a roundhouse carpenter shop, all partitions being of steel plate and steel sash. The building is entirely surrounded by a concrete platform on which are placed racks for locomotive pipes. At the rear



Firing-Up Pitts at North End of Boiler Shop

of the building are covered racks for the storage of locomotive jackets and near the racks are lye vats for cleaning the jackets.

The part of the shop devoted to tin work in the east end is provided with necessary machinery, practically all of

operating on a runway handles the brass crucible from the furnace to all parts of the pouring floor.

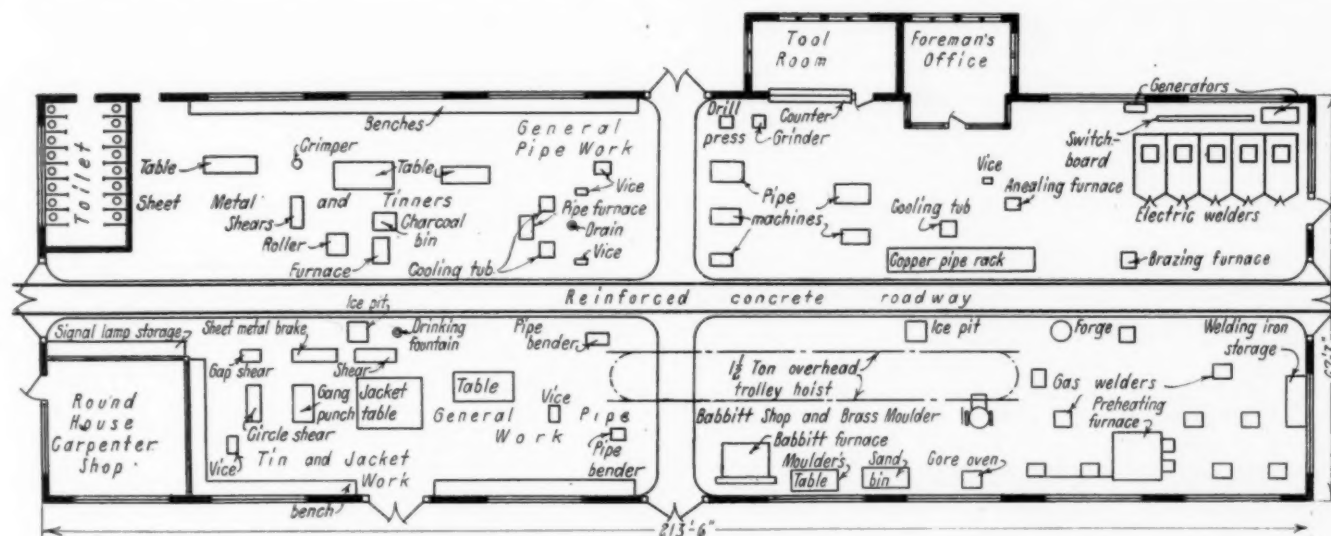
The section of this building set apart for welding work is located near the machine shop immediately adjoining the material platform. There are connections for electric welding and stations for gas welding. The gas welding floor is provided with a 6-ft. by 6-ft. pre-heating furnace as well as two pre-heating forges.

#### Power Plant—Electric Power Purchased

A great deal of care has been taken in the design and general appearance of the power plant and equipment. It is situated centrally with reference to distribution of power which is transmitted to the roundhouse as well as to the shop. The building is entirely fire-proof, being constructed of steel framing with concrete walls, Fenestra and Lupton steel sash and a 3-in. reinforced concrete slab for the roof. Steel sash has been used liberally in the walls and monitor to provide good ventilation and light.

This building is 103 ft. long by 81 ft. 9 in. wide. A concrete wall longitudinally down the center of the building divides the boiler room from the engine room. The boilers are oil fired but the boiler room affords adequate space for the installation of coal handling equipment. While the possibility of burning coal may seem remote, yet conditions might arise during the life of the plant which would make this feature very desirable. Therefore, the boiler room and engine room floor are on the same level, elevated 8 ft. above the ground level so as to leave room for cinder hoppers and cinder and coal conveying apparatus in the basement if they are ever required.

Natural draft for the boilers is supplied by a concrete chimney 189 ft. in height and 10 ft. in diameter at the top. This chimney is designed for an ultimate capacity of 3,000 hp., but to give better draft conditions for the pres-



Floor Plan of Modern Shop for Handling Pipe, Tin, Brass, Babbitt and Welding Work

which is individual motor driven. It includes 8-ft. squaring shears, a metal brake and pipe cutting and threading machines. Near the center of the shop are located facilities for babbitt and brass work such as the babbitting of crossheads and the brass hub liners on driving boxes. For the brass melting, there has been installed a Swartz 42-in. oil-fired brass melting furnace having a capacity from 500 to 1,000 lb., while for the babbitt work, the furnace is of the crucible type, made from the railway company's patterns. The driving boxes are placed on rails imbedded in the concrete floor which has been faced with paving brick between the rails. An overhead trolley with geared hoist

ent boiler capacity, a brick coping has been put in the top of the chimney to cut down its effective diameter to 9 ft. This coping can be removed whenever increased draft conditions are necessary.

Steam at 150 lb. pressure is supplied by four 300-hp. boilers installed with high settings to give ample combustion space. These boilers are supplied by two 14-in. by 8-in. by 12-in. feedwater pumps and a Cochrane open type 400-hp. capacity feedwater heater with recording apparatus. Duplicate feedwater lines supply the boilers, and the feedwater is regulated to each boiler by a Copes feedwater regulator. The boilers are fired with fuel oil, controlled

by the Merit system. The main steam header is located at the rear of the boilers near the partition between the boiler room and engine room and all valves are easily reached from a walkway leading over the boilers. There is also an auxiliary header for steam supply to the fire pump.

Electric power for operating the entire shops is purchased from the Southern California Edison Company and, therefore, no electric generating apparatus was installed in the engine room. The electric energy, delivered at 11,000 volts, 50 cycles, 3 phase, is stepped down to 2,200 volts at a substation located near the shop property line and distributed about the shops at this voltage. The two air compressors, of the Worthington make, have a capacity of 3,500 cu. ft. of free air per min. each and are driven by 800-hp. synchronous motors.

Two General Electric 500-kw. motor-generator sets furnish direct current at 250 volts to operate the large cranes, including the 250-ton crane in the machine shop and the 175-ton crane in the boiler shop, as well as the variable speed motors for operating several driving wheel lathes and reversing planers. The switchboard for controlling the electrical machinery is placed on a balcony over the engine room.

For a distance of two panels from the east end, the floor of the engine room was left out and all pumps placed here on the basement floor. Also, located in the pump pit is an Ingersoll-Rand Imperial type steam-driven compressor of 2,000 cu. ft. per min. capacity as an auxiliary to the motor-driven compressors or to furnish service light loads. The pumps comprise two of 500-gal. capacity each for boiler washing. The tanks for the enginehouse hot water boiler washing plant are located immediately outside the power house. In addition there is a DeLaval centrifugal steam turbine driven pump of 2,500 gal. per min. capacity for fire protection. The water for ordinary uses in the entire shop is furnished by the city of San Bernardino at domestic pressure.

Steam and air from the power plant are distributed to the enginehouse and shops by overhead pipe lines carried on rail supports, these lines being well lagged and jacketed. Acetylene and oxygen gases are also distributed to the shops on the same supports with the steam and air. A gas generating plant is being installed near the west property line.

Fuel oil is supplied by a system which circulates around all buildings starting at the oil supply tank located between the blacksmith shop and the power house and completing its circuit at that point. The oil is pumped by a Witt double acting 5¼-in. by 3½ in. by 5-in. pump located in the power house. The fuel oil line is laid under the floor of the buildings in shallow trenches with removable concrete covers. Outside of buildings, the line is laid underground in a split tile conduit with manholes. Closely paralleling the fuel oil line in the trenches and conduits is a steam pipe for keeping the oil warm.

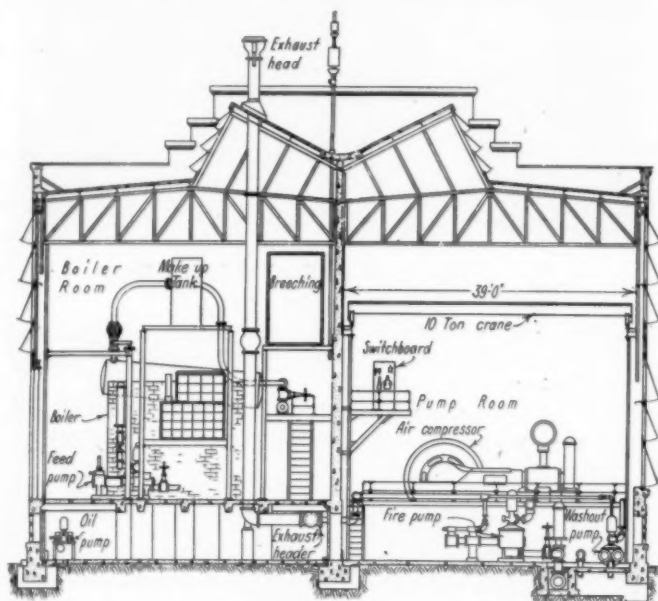
The oil reclaimed from locomotive tenders on the tender storage pits is run into a reservoir and from there it is pumped to the oil crane on the "firing pits" as has been described. An oil separating sump, located a distance of about 1,000 ft. from the shop grounds, receives all sewerage containing oil, including the washings from the locomotive tenders, oil tanks, and any other oily sewerage on the shop grounds.

#### Fire Department

Reference has been made to fire protection in connection with the power plant. Considerable care has been taken in providing fire protection because the shop is located so close to the city and also on account of the presence of large quantities of fuel oil. For these reasons a substan-

tial fire department building was erected and equipped with an American LaFrance Type 40, 40-hp., combination chemical and hose fire truck, operated by a well-organized department of shop employees. The shifts are so arranged that there is always a sufficient number of men in the building or on the shop grounds to man the equipment in any emergency.

The fire department building, constructed largely of material reclaimed from the old shop building including brick and the tile for the roofing, is of fire-proof construction throughout. It fronts on a concrete road and is a two-story building 110 ft. long by 50 ft. wide. On the first floor is space for two pieces of fire fighting apparatus and rooms for the fire chief, electric fire alarm system, and supplies. On the second floor are the quarters for the fire department, including six bedrooms, each provided with twin beds, closets and lavatories, with a sleep-



Cross Section Through Modern Steam Boiler Plant Building

ing porch at the rear of the crew's quarters. Liberal toilet and bathroom facilities and a recreation hall are provided.

Concrete roads connect the fire department with all parts of the shop grounds. These roads are also used for conveying material by means of electric storage battery trucks or trailers pulled by tractors.

#### Offices and Apprentice School

The assistant superintendent of shops has an office and one for his sub-foreman and clerks in a building located outside of the machine shop near the center of the plant. This building is 88 ft. long by 68 ft. wide, there being two stories for a length of 32 ft. On the second floor is the school for apprentices, also an office for the apprentice instructor and a blue print room. The remainder of the first floor not occupied by the offices is devoted to a wash room and locker rooms for the shop employees. The building is constructed of brick and other materials reclaimed from the old shop building and stuccoed, and altogether is well adapted to the requirements.

Suitable lavatories, provided for shop employees, are distributed about the shop grounds as required. Most of these lavatory buildings are separated from the shops and are all provided with the latest type of plumbing, including wash troughs with faucets so that the men can wash under running water tempered as desired. There are al-



together about 800, 15-in. by 15-in. by 36-in. steel lockers.

The Atchison, Topeka & Santa Fe Coast Lines Hospital Association has maintained an emergency hospital at San Bernardino for a number of years. In the reconstruction of the shops, the old hospital was removed and replaced by a new hospital built near one end of the shop grounds facing one of the main streets of the city. This building, 36 ft. by 36 ft., is of fireproof, reinforced concrete construction and houses emergency operating rooms, doctor's quarters and examining rooms, and all other equipment which goes with a modern emergency hospital.

#### Fireproof Storehouse to Be Extended

The present storehouse, built in 1909, comprises a building 50 ft. in width by 325 ft. in length. The ware room which occupies most of this structure is one story in height while the office located in one end has two stories. The office of superintendent of shops is on the first floor and that of the general storekeeper of the Santa Fe Coast Lines on the second floor. This building is fireproof, being constructed of reinforced concrete throughout with Truscon and Voigtman steel sash. A material platform extends for a distance of 500 ft. to the west of the storehouse building and supplies the locomotive shops which face the platform on that end.

With the completion of the new shop it was decided to extend the storehouse building, and the construction is now under way. The new extension will be three stories in height and of the same width as the old building adjoining it on the east. The length of the extension is 275 ft. The first floor will be an extension of the present ware room and the offices of the superintendent of shops will be moved to the extreme east end, occupying the same relative position as they did in the old building. The third floor will be devoted entirely to a ware room with



San Bernardino Shop Men's Assembly Hall

the exception of a small storage space for permanent records. This extension, like the original storehouse, will be of reinforced concrete, fireproof throughout.

A new platform is also being constructed on the east end of the building 60 ft. in width by 325 ft. in length for storage of car department material. This will give the store department a building 50 ft. wide and 600 ft. long. With the material platforms adjoining the ware rooms the total length will be 1,450 ft.

Oils are not kept in the main storehouse but in a separate building near at hand. This oil house is of concrete, 50 ft. by 110 ft., with a cellar housing the storage tanks for the various oils carried in stock. Oils for local use are issued by means of Bowser pumps on the first floor.

A visitor at this plant is impressed with the cleanliness and neatness of the entire shop. As oil is used for fuel there is no smoke and the concrete buildings retain their

new appearance. The interiors of all buildings are painted a light green which adds to the impression of cleanliness. The shop management, as well as the men, take great interest in maintaining the general appearance of the shop grounds, including the lawns, etc., which are green all the year round.

The construction of the buildings was carried out by R. B. Ball, chief engineers of the Coast Lines, under the general supervision of C. F. W. Felt, chief engineer system, and G. W. Harris, assistant chief engineer system. The general layout was made by B. P. Phelps, engineer of shop extensions, who also handled the installation of machinery and piping, while the electrical installations were in charge of L. L. King, electrical engineer of the Santa Fe. The steel work was designed by A. F. Robinson, bridge engineer system, and the architectural work by E. A. Harrison, Chicago, system architect, and W. H. Mohr, Los Angeles, Cal., Coast Lines architect.

During the entire construction program a number of contractors worked on the job, including Jos. E. Nelson & Sons of Chicago, and Robert E. McKee, Younger & Fellows, and Lynch & Channon, of Los Angeles, Cal. Much of the grading, drainage and sewerage was handled by R. F. Ware, also of Los Angeles.

## Suits Against Railroad Administration

WASHINGTON, D. C.

ON January 1, 1926, there were still pending against the Railroad Administration 3,152 suits, involving more than \$18,000,000, based on causes of action arising out of the operation of the railroads during federal control, according to a circular addressed by A. A. McLaughlin, general solicitor of the Railroad Administration, to the railroads, urging their co-operation in bringing about an early disposition of these cases, in which they are acting as agents for the administration.

"Many of the carriers are disposing of such litigation with commendable promptness, but a considerable number are falling far short of results that should be accomplished," Mr. McLaughlin says. "Thirty-four carriers failed to dispose of a single suit during the year 1925; fourteen carriers failed to dispose of a single suit during either 1924 or 1925; and four carriers have not disposed of a suit in three years. Many carriers have very few suits remaining undisposed of, but other carriers have a considerable number.

"More than six years have now elapsed since federal control ended. Prolonging this litigation is unduly expensive to both the carriers and the government, and it would seem the time has now arrived when an intensive and continuous effort should be made to dispose of all remaining suits. In making your quarterly report for quarter ending March 31, 1926, please check with former reports and if past performance has been good, do still better in the future; and if not good, see to it, for the benefit of both your company and the government, that past shortcomings are more than compensated for by diligent effort in the future.

"All pending cases should be adjusted, tried or dismissed on the first opportunity. A suit, however long neglected by the plaintiff, is always a menace. Dropping from the docket does not dispose of it. Delay is usually more disadvantageous to the government than to the plaintiff, and until a case is formally disposed of, it must be given constant attention, both by the carrier in charge and the government. May we not, therefore, confidently rely

upon you to force a disposition of each case in your charge upon the first occasion on which it is reached on the docket, and thus bring all of the government's litigation to a conclusion during the current calendar year? This can be accomplished by such effort, and will be of great advantage to all. Do not seek a review of any case by the Supreme Court of the United States, without first procuring approval of this office. Most questions of importance to the government have already been determined, and the taking of cases involving small amounts to the higher courts, can no longer be justified. This suggestion applies, in a measure, to the higher state courts, as well as the Supreme Court of the United States, particularly in cases where a question of fact is involved, and amount in controversy is small. The foregoing observations apply with equal force to suits to collect the director general's assets.

"May we not have your hearty co-operation and accomplish a speedy disposition of all litigation?"

## Shippers and State Commissions Oppose Western Rate Advance

WASHINGTON, D. C.

**B**RIEFS on behalf of the state railroad commissions and various organizations of shippers opposing the advance in rates asked by the western railroads in Ex Parte 87 were filed with the Interstate Commerce Commission this week. The brief of the western lines was filed early in March.

The first part of the state commission brief is devoted to an argument that the petition of the carriers should be dismissed because of the provisions of the Hoch-Smith resolution, on the ground that "the percentage advances in rates generally, and the flat advances on certain specific commodities, which are sought to be made, will enhance existing discriminations in violation of the express requirements of the resolution that such discriminations be removed as expeditiously as possible," and that "existing rates on the products of agriculture, including livestock, are not below the level prescribed by the resolution, and hence may not lawfully be advanced."

It is also contended that "by this application the carriers aimed to defeat the Hoch-Smith resolution." "They did in fact," the brief says, "prevent for the time being such action as the commission would otherwise have taken to effect prompt readjustments of the rates, for notwithstanding that the general rate structure investigation, No. 17,000, has nominally proceeded simultaneously with this proceeding, the emphasis has been, not on No. 17,000 and its purpose to secure a readjustment downward of the rates on agricultural products, and the removal of unjust and discriminatory rates, but has been on Ex Parte 87, an application of the carriers to secure the readjustment of all freight rates upward. The proponents of lower rates on agricultural products have, by these proceedings as they have been conducted, been placed in the position, not of advocates to secure reduced rates, but of defendants to prevent the increase of rates which the Hoch-Smith resolution aimed to reduce. The testimony of the agricultural interests has been directed mainly, not towards securing reduced rates, but against allowing an advance in present rates.

"Notwithstanding the investigation under the Hoch-Smith resolution was an emergency one, and was conducted concurrently with the application of the carriers under Ex Parte 87, no effort has been made by the carriers or by any of their representatives to introduce any

testimony or to point out any ways whereby the duty of the commission as respects unreasonable and unjustly discriminatory rate situations may be complied with, but now in their brief they make a further counter-attack, and say to the representatives of the states who appeared in these proceedings that the latter have not pointed out wherein rates might be increased to make up any deficit on agricultural products, should reductions be ordered thereon.

"The effect of the carriers' application has been and is to defeat, or to annul temporarily, those provisions of the Hoch-Smith resolution which require expeditious action on the part of the commission to readjust rates where unreasonable and unjustly discriminatory and to effect such lawful changes in the rate structure of the country as will promote the freedom of movement of the products of agriculture, including livestock."

Among the contentions made in the brief are: That the carriers are earning a fair return, that they are not guaranteed the right to earn  $5\frac{3}{4}$  per cent; that the "fair return" should be reduced below the  $5\frac{3}{4}$  per cent heretofore announced; that returns of other kinds of business are no criterion by which to measure aggregate railroad return; that the book investment of the carriers is greatly in excess of the fair value of their properties for rate-making purposes; that the carriers have failed to adapt their passenger train operations and expenses to diminished passenger traffic and that this proceeding is an attempt to recoup the resulting losses from their passenger business by increased charges upon the freight business; and that under existing rates carriers of the western district are earning a fair return on property devoted to freight business. A large part of the brief is also devoted to a discussion of the agricultural situation to show that rates on agricultural products should be reduced rather than increased.

The brief of the Chicago Association of Commerce and the Chicago Shippers' Conference Association refers to the negotiations now pending between duly authorized committees of the carriers and the shippers, looking to a comprehensive revision of the freight rate structure in Western Trunk Line Territory, and urges that the commission dismiss the petition without prejudice to the proper and lawful revision of the rates involved, as a result of the pending informal negotiations.

The Pacific Coast Vegetable Growers' and Shippers' Transportation Committee in its brief says that the "evidence in this case clearly shows that with the possible exception of the Northwestern carriers no advance whatever is necessary."

The Illinois Commerce Commission says that "in the absence of a showing by applicants that the rate level in Illinois Freight Committee Territory does not produce sufficient revenue to pay operating expenses, including taxes and depreciation, and provide a reasonable return on the investment of the property devoted to the public use, it is earnestly suggested that the carriers should not be permitted to increase the existing level of rates."

The Lehigh Portland Cement Company takes no position as to the propriety of the advance asked by the railroads but contends that if any rates are to be advanced "there are no facts of record that would warrant imposing upon cement a greater relative increase than imposed upon other commodities."

The Minnesota By-Product Coke Company objects to any increase in the rates on coal and coke from St. Paul and Lake Superior ports to destinations in the Northwest territory. Up to the middle of the week some 45 briefs had been filed with the commission either in Ex Parte 87 or in No. 17,000, although most of the briefs were filed in both cases.



# Pennsylvania's Excellent Report

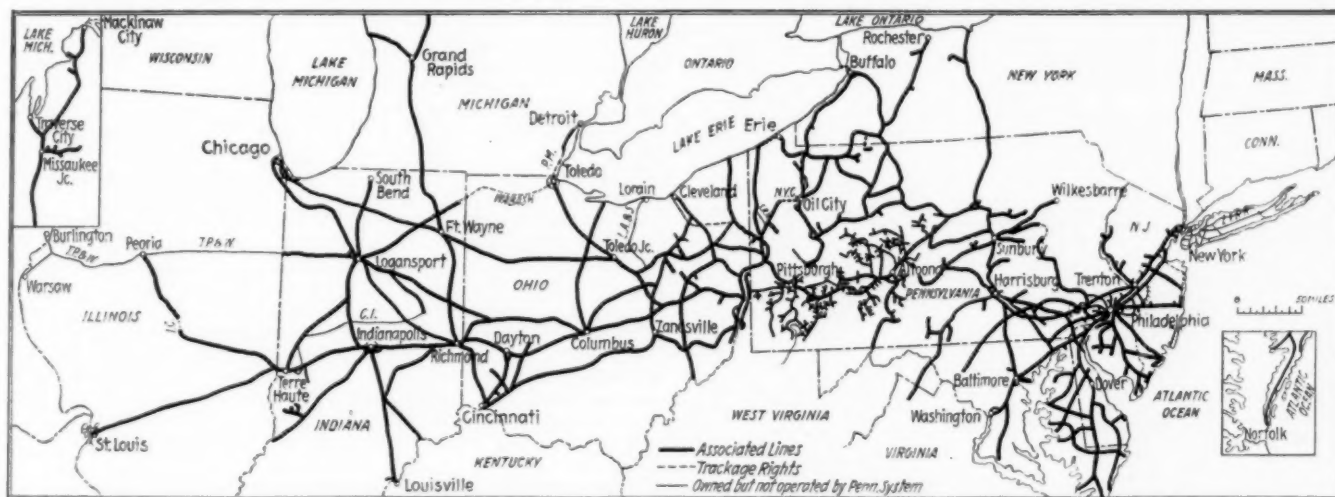
*Net income after charges in 1925 totaled \$62,220,324 or  
12.46 per cent on capital stock*

**T**HE annual report of the Pennsylvania Railroad Company which was made public on Tuesday proves to be one of the best in the company's history. It shows for 1925 net income after interest and other charges of \$62,220,324. This compares with \$38,134,677 in 1924 and represents an increase over that year of no less than 63 per cent. The net income in 1925 was equivalent to 12.46 per cent on the 499,265,700 outstanding capital stock as compared with 7.64 per cent in 1924.

The Pennsylvania management is making interesting use of this remarkable improvement in its earning power. It will be remembered that some months ago President W. W. Atterbury announced at a meeting of the Advertising Club of New York that the company was going to make sizeable appropriations for an advertising campaign. It starts out by advertising its 1925 operating results, not by reproducing excerpts from its annual re-

factor was the decrease in the debit hire of equipment balance of 29 per cent, or over \$5,000,000. The details of the year's operating results are summarized in the annual report in the following language.

"Freight and express revenues increased, while the passenger revenue decreased principally because of the continued increase in the use of private automobiles and motor buses. The effect upon the revenues of the long continued anthracite coal strike in Pennsylvania, which began September 1st, 1925, and terminated February 12th, 1926, was offset by a greater volume of bituminous coal traffic, but the temporary cessation of mining in the anthracite field, the resulting losses to mine owners, employees, and business interests, the increased fuel costs and privation suffered by the public, were harmful to the state as well as the railroads. The entire country is so closely knit together, and capital and labor are so dependent upon each other and their continuous co-opera-



The Pennsylvania

port in formal manner in the financial journals but by having prepared attractive special advertisements which it is running in both the financial journals and in the daily press. The advertisements play up the particularly interesting features of the report, are well written and are of unusually excellent typographic make-up. Nor do they lack a "sales message." "The success of the Pennsylvania Railroad," they say, "is due to the united effort of its employees and management, supported by the confidence of investors in all parts of the world. Not only is this relationship between management and men increasingly friendly and effective, but, during the past year, we have enjoyed to an unusual degree the co-operation of the general public and governmental authorities. In a continuance of this co-operative effort, the Pennsylvania Railroad finds grounds for a permanent assurance of its ability adequately to serve the public and make its proper contribution to progress and prosperity."

## Reasons for 1925 Improvement

The excellent result of 1925 is due to larger traffic and greater operating efficiency and not an unimportant

tion is so essential to the general welfare, that no large enterprise can be injuriously affected without imposing a hardship upon the public at large."

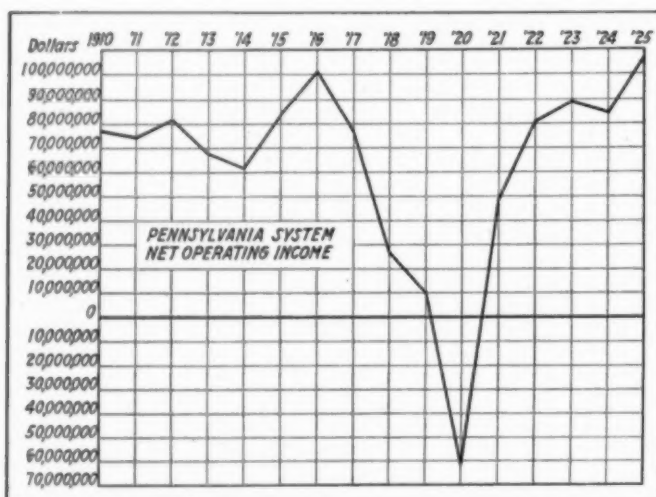
The figures show exactly that freight revenues in 1925 were 5.6 per cent greater than in 1924 although less than in 1923. There was a decrease of 1.7 per cent in passenger revenues and total operating revenues increased 4.2 per cent. Much the greater part of the increase in freight revenues was from increased tonnage of merchandise freight. Revenue tons as a whole were greater than in 1924 but less than in 1923 but the tonnage of manufactures and miscellaneous freight was greater than in either 1924 or 1923. The tonnage of bituminous coal in 1925 was about 12 per cent greater than in 1924 but still less than in 1923. In 1925 it constituted 39.33 per cent of the total revenue tonnage. Anthracite coal constituted only 4.00 per cent but it is of interest that the decrease in revenue from anthracite in 1925 as compared with 1924 was approximately equal to the increase in revenue from bituminous.

The operating expenses in 1925 were 1.9 per cent greater than in 1924 but 11 per cent less than in 1923.

The increase in operating expenses in 1925 amounted to \$9,688,674. It is of particular interest that the increase was in the maintenance accounts, there having been an increase in maintenance of way expenses of \$10,977,887 or 14.8 per cent; an increase in maintenance of equipment expenses of \$3,148,812 or 2 per cent. Transportation expenses, however, decreased by \$5,137,917 or 2 per cent. This decrease in transportation expenses even with the large traffic is attributed to greater operating efficiency, decreased costs for fuel and a reduction in loss and damage claims. The operating ratio of 78.32 compared with 80.16 in 1924 and was the best in an unbroken succession of improving operating ratios during the years since federal control. It has already been noted that there was a very substantial decrease in the debit hire of equipment balance. The 1924 debit balance was \$18,034,348 whereas that in 1925 was only \$12,723,961, 29 per cent less.

#### Net Railway Operating Income Increased 27 Per Cent

The 1925 net railway operating income or net after equipment and joint facility rents was \$100,108,007 as compared with \$78,799,913 in 1924, an increase of \$21,308,094 or 27 per cent. The 1925 net railway operating income was the largest that the company has ever reported. It was equivalent to 4.66 per cent on the investment in road and equipment (not including material and supplies or other working capital). The per cent of return in 1924 was 3.74 per cent. The 1925 per cent of return was the highest to be reported since 1916 and it was exceeded in each of the years from 1910 to 1916 with the exception of only 1913 and 1914. The Pennsylvania even with its 1925 improvement has not yet



therefore regained quite its full pre-war earning power and it is far from earning the  $5\frac{3}{4}$  per cent that the Interstate Commerce Commission has established as a fair rate of return.

The annual report shows that the Pennsylvania now has an investment in road and equipment of \$2,147,439,758. This was increased in 1925 in the amount of \$24,070,210 which amount while large is still comparatively small for such a large property as the Pennsylvania. In 1924 the increase in investment in road and equipment was \$43,883,869. The difference as between the two years was almost entirely in equipment. However, the Pennsylvania now has a very extensive list of projects under way. First, the equipment program for 1926 provides for 300 steam locomotives, 15 electric locomotives, 2,000 automobile box cars, 100 cabin cars, 74 passenger coaches, 125 baggage-express cars; 7 passenger-baggage cars; 8 café cars; 20 electric cars, 4 car floats and 1

mooring scow. In addition 100 locomotive tenders, 6 electric road locomotives, 2 electric switching locomotives and 24 dining cars have already been ordered. Orders for 200 of the 300 steam locomotives were placed only last week. The company now has in progress its extensive passenger terminal program at Philadelphia which, now that the Chicago Union Station is completed, is the most important single development at present under way.

President W. W. Atterbury in his remarks to stockholders has some very interesting comments concerning some of the broader problems of railroad management. In particular he devotes considerable space to relations with employees, referring particularly to the Watson-Parker bill and the results of the Pennsylvania employee representation plan. On these points he speaks as follows:

"The management of the Pennsylvania Railroad believes in its employees, and its experience justifies the statement that when a spirit of understanding is established, the representatives of the employees can be expected to deal just as fairly with the company as the employees are justified in expecting it to deal with them. Joint handling of labor questions through reviewing committees representing with equal power both management and men has thus come to be fundamental to the Pennsylvania Railroad policy, and is every day becoming more firmly established as a sound method of insuring industrial peace and producing the best results for all.

"It is gratifying that recognition has now been given in a bill pending before Congress to the desirability of just such methods of handling labor questions throughout the country. The proposed legislation, known as the Watson-Parker Bill, would repeal existing railroad labor legislation as expressed in the Transportation Act, and substitute for it a method of dealing with labor questions which holds promise of far more satisfactory results than anything which has yet been realized.

"The pending bill provides for the creation on each railroad, or group of railroads, of boards of adjustment similar to the joint reviewing committees on the Pennsylvania Railroad. . . .

"The bill has been well described as providing 'machinery for the arrangement of peace; not a manual of war.' The whole purpose of the legislation is to encourage and provide for the settlement of disputes by mutual consent and in the interest of all parties. Above all things the bill represents expressed recognition on the part of both railroad management and railroad employees that uninterrupted transportation is of paramount importance to the public, and that both management and employees have a primary duty to compose their differences fairly, without inconvenience to the public or undue burden on the public.

"The public interest is thoroughly protected in the bill, for in the event of any dispute going to arbitration, the arbitrators may be regarded as representing the public, and, in case arbitration should be declined, the report of the fact-finding commission appointed by the President will bring the full force of public opinion to bear in the direction of settling the dispute on its real merits. The proposed bill takes away from the Interstate Commerce Commission none of its present power to review proposals for increased freight rates or to take any other measures for the protection of the public interest against burdensome charges or conditions of any kind. The bill, in brief, protects the public interest in every practicable way.

"If the proposed legislation is passed, it will not require any modification of the employee representation plan of your company, because the intent of the Watson-Parker Bill is that disputed questions shall, as far as possible, be settled in conference between representatives designated respectively by the carriers and the employees. That is the basis of the Pennsylvania Railroad employee representation plan. In view, therefore, of the present dissatisfaction with the labor provisions of the Transportation Act, and the promise the proposed legislation gives of placing the whole matter upon a new and better basis, your management has joined heartily with its own employees and with the management and representatives of employees of other railroads in urging adoption of the proposed measure."

#### Eightieth Anniversary

Some extremely interesting details of Pennsylvania Railroad history and pertinent analysis of the position that the company holds today are outlined in the concluding section of General Atterbury's remarks in which he com-



ments on the company's eightieth anniversary. General Atterbury says:

"The date of the next annual meeting on April 13, 1926, is the eightieth anniversary of the incorporation of the Pennsylvania Railroad Company. Parts of the system, however, are much older than the parent company. Notwithstanding many financial and business vicissitudes in that long period, the company has endeavored to discharge its duty to the public. It has encouraged the development of territory, and industries served by its lines and connections, and safeguarded the interests of the stock and bondholders, and the welfare of its employees. Since its incorporation the company has paid cash dividends amounting to \$783,042,707, upon its capital stock or an average of 6.2 per cent per annum, and in addition has paid stock dividends, representing cash expended for additions and betterments, and issued valuable stock rights. The value of the property and the average and regular returns received by the stockholders place its securities in the first rank of reliable investments. It also pursued the sound financial policy of devoting several hundred millions of dollars of its income to provide betterments and improvements to its railroad and equipment, instead of issuing stock or bonds

PENNSYLVANIA RAILROAD COMPANY, SELECTED ITEMS FROM INCOME STATEMENT

	1925	1924	Increase or decrease
Average mileage operated.....	10,582.34	10,575.00	7.34
Railway operating revenues.....	\$672,136,962	\$645,299,176	\$26,837,786
Maintenance of way.....	\$85,003,417	\$74,025,530	\$10,977,887
Maintenance of equipment.....	162,033,562	158,884,751	3,148,812
Transportation.....	245,226,068	250,364,384	-5,137,917
Total operating expenses.....	\$527,139,347	\$517,450,673	\$9,688,674
Operating ratio.....	78.5	80.2	-1.8
Net revenue from operations.....	\$144,997,615	\$127,848,503	\$17,149,112
Railway tax accruals.....	31,700,789	30,457,970	1,242,819
Railway operating income.....	\$113,016,964	\$97,177,586	\$15,839,377
Hire of equipment—Dr. bal.....	\$12,723,961	\$18,034,348	—\$5,310,387
Joint facility rents—Dr. bal.....	184,995	343,325	—158,330
Net railway operating income.....	\$100,108,008	\$78,799,913	\$21,308,095
Non-operating income.....	37,281,490	31,003,921	6,277,569
Gross income.....	\$137,389,498	\$109,808,834	\$27,580,663
Rent for leased roads.....	\$44,385,949	\$38,291,126	\$6,094,822
Interest on funded debt.....	28,261,041	30,527,956	—2,266,915
Total deductions from gross income.....	\$75,169,173	\$71,674,157	\$3,495,016
Net income.....	\$62,220,324	\$38,134,677	\$24,085,647
Disposition of net income:			
Income applied to sinking funds, etc.....	\$3,929,305	\$3,419,466	\$509,839
Dividends on common stock, 6 per cent.....	29,950,404	29,950,404	.....
Construction expenditures during current year, borne by Pa. R. R. Co.....	160,786	425,371	—291,586
Total.....	\$34,040,495	\$33,822,241	\$218,254
Balance.....	\$28,179,829	\$4,312,436	\$23,867,394
Add:			
Special dividends on stock of Pennsylvania Co.....	.....	\$8,000,000	\$8,000,000
Less:			
Construction expenditures, etc., borne by Pa. R. R. Co.....	\$2,286,844	\$1,262,655	\$1,024,189
Balance transferred to profit and loss.....	\$25,892,985	\$11,049,781	\$14,843,205

to procure all the funds therefor. The result of this policy is that while the total investment in your system amounts to almost two and a half billion dollars, the outstanding securities in the hands of the public amount at par to slightly over one and a half billion dollars.

"It is also interesting to recall in these times when the 150th anniversary of the Declaration of American Independence will be celebrated and the centennial of American railroads is being commemorated, that your company has, as part of its main line between Philadelphia and the Susquehanna river at Columbia, a railroad which was incorporated in 1823, or 103 years ago, as 'The Pennsylvania Railroad.' This charter is the oldest under which any railroad promotion work was ever done on the American continent, and was amended in 1826, 100 years ago. After surveys and estimates had been completed, and the first American locomotive had been built for this railroad by John Stevens and given a trial trip on his estate at Hoboken, N. J., the State of Pennsylvania, in 1828, undertook the construction of the railroad as planned under the preceding acts, because private capital could not at that time be secured for such a novel enterprise.

This Pennsylvania Railroad was opened for transportation service on April 16th, 1834, as a part of the state's main line of public works, and was acquired by your company by purchase in 1857. It was among the first standard railroad projects in the United States to be constructed and operated as a common carrier. Engaged in its surveys and construction, were John Edgar Thomson and William Hasell Wilson. Mr. Thomson was later employed to survey and locate the present Pennsylvania Railroad between Harrisburg and Pittsburgh and became chief engineer and later president of the company, while Mr. Wilson also was engaged in its engineering work and became its chief engineer of construction, and acted as president of some branch roads in the Pennsylvania System. The railroad was extended from Columbia to Harrisburg in the period 1832-1838, under another organization known as the Harrisburg, Portsmouth, Mt. Joy & Lancaster Railroad, being a part of our present main line, and the president of that company was James Buchanan, who was afterwards President of the United States.

"From such humble origin, when the first trains were hauled by horses, the railroads embraced in the Pennsylvania Railroad System now constitute 'The Broadway of America's transportation system,' as it is the largest carrier of railroad traffic in the United States. It reaches from the Atlantic Ocean to the Mississippi river, and from the Great Lakes to the Potomac and Ohio rivers, directly connecting with the most important railroads of the country, and serving a territory of 13 states and the District of Columbia, in which about one-half the population of the country resides.

"This company's system has become one of the greatest contributors of our national prosperity, not only because of its transportation service, which works for the public day and night every day in the year irrespective of weather conditions, but also through the purchase of materials and supplies and improvement work, which aggregated over \$225,000,000 in 1925; the payment of \$35,000,000 in taxes, and the employment on its lines of about 214,000 persons, to whom close to \$375,000,000 were paid in wages last year.

"The public service performed by the Pennsylvania Railroad System in 1925 was equivalent to moving one ton of freight a distance of 45 billion miles and to moving one passenger a distance of almost 6½ billion miles.

"The operating ratio in 1921 was 87.56 per cent; 1922, 82.35 per cent; 1923, 81.77 per cent; 1924, 80.16 per cent, and 1925, 78.32 per cent, thus reflecting steady improvement in operating efficiency since the close of federal control. 15,292,000 tons of coal were consumed by locomotives, which was an increase of only 241,000 tons compared with 1924, notwithstanding a large increase in traffic. There were 5,506,700 cross-ties and 203,600 tons of new steel rail laid in 1925, or 822,000 cross-ties and 45,700 tons of rail more than in 1924.

"For the benefit of this large organization the relief and pension departments, and other welfare agencies established many years ago, are operated to ameliorate the vicissitudes of sickness, accident, death and old age. By regular work, good wages, and the encouragement of thrift the company aims to promote the welfare of its officers and employees.

"The stockholders of your company number 140,578, and checks in payment of dividends and interest go to residents in every state of the union and nearly all foreign countries.

"This recital of the company's progress emphasizes the responsibility of the stockholders, officers and employees to uphold the company's reputation, and your directors request them to recommend the use of its facilities for all available traffic."

## Proposed Railroad Legislation

WASHINGTON, D. C.

SENATOR CUMMINS' revised consolidation bill, amended in several particulars as the result of hearings before the Senate committee on interstate commerce, was approved by a vote of the committee on April 3 and the new bill was introduced in the Senate on April 5 as S. 3840. A formal report on the bill as printed will be made after the committee has had an opportunity to hold a meeting. The principal changes are an increase from three to five years in the period allowed for voluntary consolidations on application to the Interstate Commerce Commission before the commission would be required to prepare a complete consolidation plan, and an amendment of the recapture provisions to base the recapture of excess earnings on an average for three years instead of on the earnings for a single year. Also a large

number of detail changes have been made in the administrative provisions. The first paragraph of the bill, stating its purpose, now reads as follows:

"Inasmuch as the public interest requires that adequate transportation service shall be furnished by carriers to the public at the lowest rates consistent with such service and a fair return upon the value of the railway properties held for and used in such transportation, and inasmuch as the varied conditions under which such transportation occurs render it impossible to accomplish that end without the further consolidation of carriers and unification of railway properties, it is hereby declared to be the policy of Congress that a limited number of systems should be established," etc.

The bill provides that "if at the end of five years from the passage of the Railway Consolidation Act of 1926, the limited number of systems to be established in accordance with the policy set forth in paragraph (4) have not, in the opinion of the commission, been adequately provided for in its orders, the commission shall, as soon as practicable, prepare and by order, entered after notice and public hearing as hereinafter in this paragraph provided, adopt a plan for the completion of such limited number of systems, either by the establishment of additional systems or by the allocation to any existing system of any carrier or properties not included in any such approved consolidation or unification. . . . Such plan shall not provide for the separation of any carriers or of any railway properties included in any consolidation or unification approved by the commission under this section unless prior to the adoption of the plan the board of directors and the holders of the voting securities of each of the carriers a party to or resulting from the consolidation, or acquiring properties or control under the unification, grant consent to any such separation in accordance with such plan as the commission may thereafter adopt. The commission may at any time after the adoption of the plan, either upon its own motion or upon application, prepare and by order . . . adopt modifications of such plan.

"After the passage of the Railway Consolidation Act of 1926, the consolidation of carriers and the unification of railway properties and of control shall be effected only in accordance with the foregoing provisions of this section, and after the adoption of the plan no consolidation or unification shall be authorized or approved under this section unless so effected and unless the commission finds that it is, in addition, in harmony with, and in furtherance of, the plan."

#### Recapture on Three-Year Basis

Paragraph 6 of section 15a of the law would be amended to read: "If under the provisions of this section a carrier receives for any period of three successive and immediately preceding years a net railway operating income whose annual average is in excess of 6 per centum of the annual average value of the railway property held for and used by it in the service of transportation during such period, such excess shall, except as provided in paragraphs (7), (8), (13), and (15), be recoverable by and paid to the commission, within the first four months following the close of the period for which such computation is made, for the purpose of establishing a general railroad contingent fund as hereinafter described." Provision is also made for the distribution of the general railroad contingent fund among the carriers earning less than 5 per cent.

A good deal of doubt has been expressed as to whether consolidation legislation can be pushed to a conclusion at this session, although the House committee on interstate and foreign commerce has indicated a willingness to consider the subject and to hold hearings if it appears likely

that the Senate will consider the bill. The Republican steering committee of the Senate has announced a program of legislation by which the railroad labor bill, which has passed the House, will be made the unfinished business following the consideration of the Italian debt settlement, which is now under debate, and the public building bill, subject to interruptions of a special nature such as the Brookhart-Steck contested election case, which was taken up on April 5. A poll of the Senators is said to show that two-thirds of them are in favor of the labor bill.

The Senate committee on interstate commerce at its meeting on April 3 also approved with some amendments a bill introduced by Senator Mayfield to amend paragraph 18 of section 1 of the commerce act to exempt extensions of existing lines within a state from the requirements of a certificate of the Interstate Commerce Commission. The bill provides a requirement of a certificate for the construction of an entirely new line of railroad or for abandonment but that "no such certificate for the abandonment of any line of railroad, or any portion of any line of railroad, located wholly within one state, or of the operation thereof, shall operate to relieve the carrier from also procuring such authority for such abandonment from that state as may be required by its laws."

#### Passes on Alaska R. R.

The Senate on April 2 passed the bill to give the management of the government's Alaska Railroad the privilege of issuing and interchanging passes on the same basis that is authorized in the case of railroads in the United States. The bill was urged by the Interior Department so that employees of the Alaska Railroad might be enabled to travel in the United States on passes.

A sub-committee of the Senate Committee on interstate commerce held a hearing on April 1 and 2 on Senator Pittman's bill to amend section 13 of the Commerce Act so as to restore to the state commissions some of the rate-making power they lost by the passage of the Transportation Act. John E. Benton, general solicitor of the National Association of Railway and Utilities Commissioners, testified in support of the bill and B. W. Scandrett, general solicitor of the Northern Pacific, appeared in opposition.

Representative McLaughlin of Nebraska, who recently tried to stir up the agitation for the abolition of the Pullman surcharge, has introduced a bill, H. R. 10,930, authorizing and directing the Interstate Commerce Commission to establish a system of mileage books to be issued to travelers at a reduced rate.

Representative Newton of Minnesota is expected to introduce in the House a bill combining four bills previously introduced, as approved by the committee on interstate and foreign commerce, with amendments, after hearings. The bill would amend paragraph 5 of section 1 of the commerce act so as to relieve consignees who act as agents in disposing of property, such as commission merchants, from liability for undercharges not discovered until after the delivery of a shipment. Another provision relates to the extension of time for the payment of freight charges, under regulations prescribed by the Interstate Commerce Commission. Another adopts the suggestion made by Commissioner Esch allowing a maximum of seven months for the suspension of a rate schedule by the commission. Section 20 of the act would be amended to make the delivering carrier liable in the same manner and to the same extent as the initial carrier for loss or damage to freight. Under another amendment included in the bill the time for the filing of claims of short lines under section 204 would be reduced to 60 days from the passage of the bill.





*A View of the Radial Scrap Dock Where Scrap is Handled for Only 32 Cents per Ton*

## Delaware & Hudson Has Well Equipped Store Department

*Radial scrap dock cuts sorting costs to new low record of 34 cents a ton—Gantries for lumber handling*

**T**HE Delaware & Hudson, though but 883 miles long, is a road whose traffic density is such as to call for expenditures for material and supplies other than fuel ranging from \$400,000 to \$800,000 monthly with the volume of stock carried from month to month for current needs varying from \$2,500,000 to \$3,-

tices which are distinctive advances in supply handling or control.

### Quality Buying Observed

On the threshold of what savors of a period when an unusual curiosity if not a critical interest is likely to be taken in the methods by which railroad buying is conducted, it is observed that the Delaware & Hudson particularly enjoys the standing of a road where "quality" in purchasing is more than an echo, and where neither specifications nor purchase price show back strain from bowing to traffic. A rigid adherence to these principles appears equally characteristic of the purchasing phase of the work, as neatness is characteristic of the store-keeping, which functions separately from the other.

The store-keeping is principally carried on at Colonie, the site of the Delaware & Hudson shops, 15 miles east of Albany. Colonie is particularly well-known in railway circles for its car-rebuilding contests, which are annual events on this road. In the success of these contests, as well as in routine car-rebuilding, and similar programs of work, the store department has proved a potent factor in two principal respects, one, in protecting not only the program but the actual work under way from shortages of material, and the other in the close attention given to the care of the material.

The success claimed in avoiding shortages is the result of several factors, first among which is the early determination on the Delaware & Hudson of the future needs for such work. The bills of material for program work are prepared well in advance and give such information as enables the department to secure material without resorting to the guesswork and haste that promote error, entail delays and compel substitutions at the last moment. The highly developed state of the supply work in this respect is well illustrated in connection with the rail pro-



*The Dock at Closer Range*

000,000. While in the administration of this work the Delaware & Hudson has not gone to extremities in adopting those methods and practices which have given store-keeping in the last decade a prominence never before enjoyed in this country, not only has it adopted many of them to the extent considered helpful or allowed by existing facilities, but it has been following some prac-

gram, which is not only completed as early as September 10, of the year preceding that in which the rail is to be laid, but discloses to the store department, where each stretch of rail is required, the condition of the old rail, its tonnage and the places where it is to be relaid. This schedule also affords the store department detailed and complete information on the description, tonnage and destination of all track accessories required.

Another factor in the car-rebuilding and similar work which has promoted efficiency lies in the provision made for keeping working stocks of material convenient to the work, where frequent checks on the quantities carried and insistence upon neatness, afford little excuse for mistakes as to the quantities on hand. This habitual neatness of material stocks around points of storage as well as in the vicinity of work, is also a factor in the care of material, in that it avoids the deterioration in the materials that results from neglect and discloses the true condition of all stock prior to the time when they are issued for use, thus eliminating the possibility of mistakes concerning its serviceability. It is of particular interest with respect to the care of material, moreover, that at Colonie the basement of the storehouse is utilized for the storage of materials which are commonly kept in make-shift sheds, or even out of doors; representative materials in this classification including driving boxes, arch brick, lagging, netting, as well as sheet metals, hose, wire, etc.

#### Technical Magazines Filed

The store itself is a three-story structure of brick with a basement and with platforms (partially of concrete) around the outside. The basement has concrete walls and floor. It is accessible from the exterior by means of a concrete incline at the rear of the building adapted to the tractor operation, while communication with the upper floors is afforded, both by a stairway and a freight eleva-



A Pause on the Sorting Table While the Magnet Feeds the "Lions"

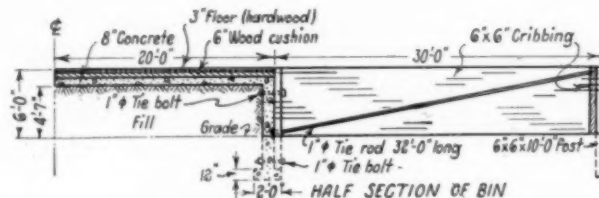
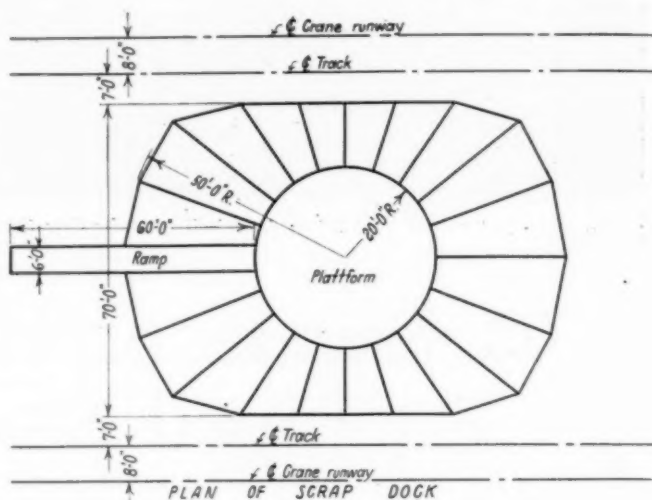
tor. On the first floor of the storehouse are the offices of the general store-keeper and the main storeroom, the former having a distinctiveness in the number and variety of technical magazines and railway journals on file.

The main storeroom is equipped with sectional racks for the storage of all small articles, including bolts and similar material which call for shelter and are adapted to shelves. The shelves are painted white with black trim and all materials on them are stacked according to the unit piling system with the aid of metal trays. Labels on the shelves give the names of the articles and sizes and catalog numbers for ready reference in finding the materials, and for a check in making correct charges and in

ordering. The unusually high ceiling of this storeroom and the wide aiseways, together with the practice of keeping the interior painted white, are aids in producing a roomy and orderly appearance on this floor.

The upper floor of the storehouse is devoted to the storage of stationery and particularly to a printing establishment which is equipped with power presses and bindery equipment for handling a very substantial percentage of all the printing work required by the company.

Consistent with the best practice in material handling the storehouse forms one of a group of shop buildings



The Plan of the Radial Scrap Dock

built along either side of a strip of ground 100 ft. wide which not only is equipped with narrow-gage tracks extending into the various buildings but is served throughout its length by a traveling crane beneath which the storehouse shipping track and loading platform is also located. In addition to this craneway the storehouse has access to a transverse craneway across the terminal area by means of which material can be transferred from the yard adjacent to the storehouse to the car shop area. A craneway has also been established in the lumber yard, the latter being situated near the car shop and planing mill where the work of unloading and issuing lumber is now not only a simple but decidedly economical and expeditious process.

#### Radial Scrap Dock Proves Profitable

A unique feature of storekeeping on the Delaware & Hudson is found in its methods and facilities for handling scrap. Scrap accumulations on this road range from 20,000 to 30,000 tons a year, while the sales range from \$500,000 to \$600,000 annually. Prior to 1921 it was the practice to accumulate this scrap at several points on the line and to prepare it for sale at longitudinal scrap docks with the elevated platform facilities. In 1923 the method was radically changed. The practice was adopted of shipping all scrap to Colonie, with the exception of a small proportion of scrap sold in Pennsylvania markets. For the better handling of this scrap at Colonie a radial type dock was built. This facility was established at one



end of the craneway yard serving the store, as described above, and the existing crane runway extended to permit the free movement over the dock of a new crane acquired for scrap handling. The dock consists of a cluster of bins six feet deep forming a complete circle around a circular platform 40 ft. in diameter, which forms the sorting table. This platform is built upon a fill so that the surface, which consists of three-inch hardwood planking on a concrete foundation, is level with the top of the 20 bins, provided for the different kinds of scrap.

Cars of scrap reach and leave this dock on two tracks



Inside the Store Room at Colonie

laid between the dock and the crane runway. The process of handling scrap is that of picking the scrap out of the cars with an electric magnet operated by the crane and dumping it on the circular platform as rapidly as sorters can classify it and throw it into the various bins, an operation which can be performed with little movement and with little need for mechanical assistance. When the latter is required, as in the case of handling couplers, etc., this is performed by the crane, which is always in the vicinity and subject to immediate call. During the process of sorting, the crane is kept employed by transferring the sorted scrap from the bins into out-going cars, as well as to serve the reclamation operations (carried on in a shed adjacent to the craneway), or in operating over an extension of the yard where heavy scrap is accumulated. The entire process is a continuous one and is not only marked by the dispatch with which it is accomplished, but also by the unusually small force employed, which consists of a foreman, crane operator and four sorters, working on a piece basis. The effect on the workmen

is well demonstrated by the fact that the men now handling the scrap have all been employed in this work continuously during the two years of the dock's operation. The experience in sorting acquired in this period by men who are of a higher calibre than are usually employed in scrap dock operations is of no small advantage to the company in securing speed and accuracy in the operation.

That the facility has proved a profitable venture on the Delaware & Hudson is indicated by the fact that in 1924 the company prepared 32,341 tons of scrap for sale at this dock at a cost of only 34.1 cents per ton, as compared with 79.6 cents per ton for handling 20,567 tons in 1921. On the basis of the tonnage handled in 1924 the

#### SCRAP DOCK OPERATIONS COMPARED

Value of scrap handled and sold in 1924.....	\$607,700.36
Payroll January 1 to December 31, 1921.....	16,383.96
Payroll January 1 to December 31, 1924.....	11,330.37
Total tonnage graded, loaded and sold in 1921*.....	20,567
Total tonnage graded, loaded and sold in 1924*.....	32,341
Cost per ton in 1921.....cents	79.6
Cost per ton in 1924.....cents	34.1
Decreased cost per ton year in 1924 over 1921.....cents	45.5
Per cent decrease.....	57.1
Cost of tonnage handled in 1924, computed on cost of handling in 1921: 32,341 tons at 79.6 cents.....	\$26,459.84
Cost of tonnage handled in 1924, computed on cost of handling in 1924: 32,341 tons at 34.1 cents.....	11,330.37
Decreased cost of handling in 1924 over 1921.....	15,129.47
Decrease in number of days cars held under load in 1924 over 1921.....per cent	50

\*Note—To grade and sell this amount of tonnage, it was necessary to receive and unload a corresponding amount of tonnage.

#### SCRAP DOCK OPERATIONS IN 1924

Cost of extending crane runway.....	\$3,747.09
Cost of 10-ton crane and lifting magnet.....	11,331.87
Cost of radial dock.....	5,210.65
Cost of reclamation shed.....	2,793.60
	\$23,083.21
Reduction in cost of handling 32,341 tons in 1924, versus cost of handling 32,341 tons in 1921.....	15,129.47
Less interest on investment at 5 per cent.....	\$1,154.16
Less depreciation on plant at 5 per cent.....	1,154.16
Less maintenance on plant at 5 per cent.....	1,154.16
	3,462.48
Net earnings.....	\$11,666.99
Per cent net earnings.....	50.5
Amount invested at 5 per cent that would require an annual interest of \$11,666.99.....	\$233,339.80

net saving after deductions for interest on the investment, depreciation and maintenance of the plant, was \$11,666, or 50 per cent, with which is to be considered a decrease of 50 per cent in the number of days that cars were under load awaiting scrap sorting operations, but the principal saving accomplished is in cutting off 20 men from the scrap handling force formerly required. The cost of the dock, as shown in the tabulations, comprises \$3,747 for extending the craneway to serve this facility and the scrap yard, \$11,331 for a 10-ton crane and a magnet 52½ in. in diameter, \$5,210 for the dock and \$2,793 for the reclamation pit, where typical reclamation operations are carried on, including the cleaning of brass borings and the repair of maintenance of way tools, of which there were 14,573 repaired in 1924 at a cost of \$6,854.

All scrap handled on this dock is sorted according to the classifications recommended by the American Railway Association and is sold every 30 days, it being one of the fixed conclusions of this company that it does not pay to speculate on the scrap market. In this connection

#### SPECIFICATIONS TO SCRAP BIDDERS

Please quote on this sheet price per unit specified on the following scrap materials. This scrap will be sold f. o. b. shipping point. Fill in your price f. o. b. points named.

Sealed bids for this scrap to receive consideration must be in this office by 12 o'clock noon on.....  
Envelopes containing bids should be marked in lower left hand corner "Bid on scrap," and no change in your quotation will be permitted after it is filed.

The right to accept or reject part or all of your bid is reserved. If accepted, the following terms and conditions will govern, and will be made part of the transaction in all sales:

Final shipping directions must be furnished within 10 days from date of award.

Shipment will be made within 60 days after receipt of such shipping directions, unless prevented by embargoes.

If shipment is not made within this period, unless prevented by embargoes, buyer has the option to cancel balance due, within ten days after the expiration of such period; otherwise the sale will stand as originally made.

Payment to be made by sight draft attached to bill of lading.

Railroad weights at loading point to govern settlements.

No claims of any kind, including demurrage, will be allowed.

it is significant, moreover, that the company, has for the last 20 years followed the practice of selling all its scrap



The Way Lumber Is Handled—Bundle Method of Piling

on a sight-draft bill of lading and that by consistently regular practices both in the sorting and delivery of scrap and in fair dealing with scrap buyers it has never suffered a single loss from its scrap sales throughout the entire period. The rules governing scrap sales on this road are set forth in the terms of sale, which are shown at the bottom of page 1017.

## Report on Erie Train Stop

WASHINGTON, D. C.

**E.** H. DE GROOT, JR., director of the Bureau of Signals and Train Control Devices of the Interstate Commerce Commission, has addressed a letter to F. D. Underwood, president of the Erie, regarding the preliminary inspection by the commission's engineers of the installation of the intermittent induction auto-manual train-stop device of the General Railway Signal Company on the Delaware division of the Erie between Lordville and Deposit, N. Y., a distance of 20.48 miles. As a result of this inspection, the following criticisms and comments are offered to point out "such matters as may be helpful to the carrier in checking its installation against the specifications and requirements of the commission:"

1. The track inductors as located and fastened make displacement or removal unlikely, and it is, therefore, believed that the employment of detectors is not required on this installation.

2. The closing of the roadway inductor winding results in a clear operation of the device; hence a cross in the wires leading to this winding would result in a false clear condition of the inductor. It is therefore vital that the installation and maintenance of the track inductor circuit shall be such as to positively protect the integrity of this circuit.

3. With a signal in the clear position, the polarized track relay is picked up and the track inductor winding closed, so that, should a signal fail in the clear position with a train in the block, the stop inductor at the failing signal would constitute the only automatic train-stop protection afforded against a following train, and the degree of protection would vary with the location of the train occupying the block. It is suggested that this be given careful consideration with a view of possibly securing increased protection under these conditions.

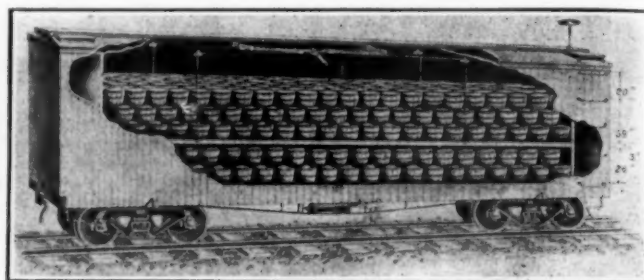
4. It is suggested that the type of fouling protection employed at crossovers be considered with a view to possibly securing increased protection.

5. Since certain possible crosses in the locomotive wiring could result in a false clear operation, it is obvious that integrity of these circuits must be adequately protected at all times.

This letter is not to be taken or construed as an act of the commission.

## Adjustable Double Deck Car

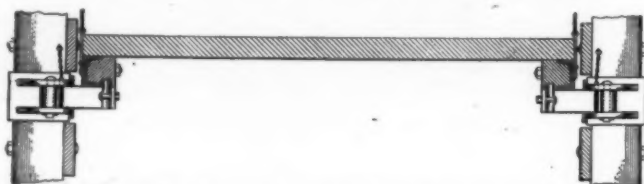
**W**ITH the object of obtaining maximum loading in cars carrying fruit, vegetables, live stock and automobiles, the Shelton Adjustable Double Deck Car Company, Monadnock Building, San Francisco, Cal., have placed on the market an adjustable deck, which can be used in cars hauling the above commodities. It can be installed in refrigerator cars without interfering with the cooling equipment. The double deck is permanent in the standard type of stock car used to carry



Double Deck in Position in a Car Loaded with Fruit

small live stock which eliminates it as a carrier for large live stock. Stock cars equipped with the adjustable double deck can be used for the transportation of large and small live stock as the deck can either be lowered to the floor or raised to the top of the car, in which positions it occupies only  $4\frac{1}{2}$  in. of the space in the car.

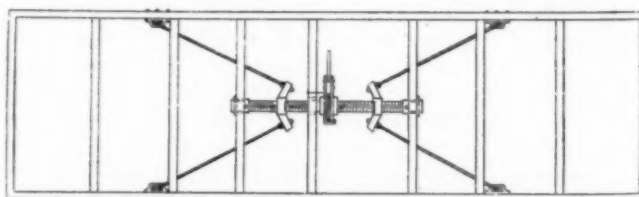
The deck can be installed without any changes in the construction of the car. The operating mechanism does



The Parallel Side Beams of the Deck Rest on Pins Located in the End of the Brackets—The Brackets, When Not in Use Swing Out of the Way

not interfere, in any way, with the utilization of the car for other purposes, nor does it have any complicated parts to get out of order. After the deck is once installed, one man can change the car in a few minutes from a single deck to a double deck, or vice versa. The deck is self-locking, assuring stability and rigidity.

The deck is supported by four wire cables which pass



Top View, Showing the Mechanical Lifting Parts

over four pulleys, two of which are located on each side of the car. The ends of the cables are attached to two yokes through which passes a turnbuckle screw with a right-handed thread on one end and a left-handed thread on the other end. The turnbuckle is operated by a ratchet. This lifting mechanism is shown in one of the illustrations.



# Locomotive Repair Costs Criticized

*I. C. C. calls expenditures by New Haven in outside shops unreasonable*

WASHINGTON, D. C.

THE Interstate Commerce Commission has issued another report on its investigation of the cost of locomotive repairs at outside shops, finding that the total cost to the New York, New Haven & Hartford of repairs to 177 locomotives at outside shops in 1922, 1923 and 1924 exceeded by \$1,827,345 the cost of similar or heavier repairs on the same or heavier classes of locomotives in the company's own shops, and that "the greater portion of such excess cost was an unreasonable expenditure for maintenance of equipment and not in the interest of efficient and economical management and reasonable expenditures for maintenance of way, structures and equipment as required by section 15a of the act." Commissioners Aitchison and Lewis dissented and Commissioner Woodlock, in a separate opinion, concurred in the report "in the cold, clear light of 'hindsight'" only with qualifications.

An abstract of the report and of the separate opinions follows:

In all, respondent sent to contract shops, including the two outside railroad shops, between July 1, 1922, and January 24, 1924, 231 locomotives and 40 additional boilers, which were repaired at a total cost of \$3,733,514. Classified repairs were made to 177 locomotives at a cost of \$3,310,799, unclassified repairs to 50 at a cost of \$93,417, and 4 were dismantled and condemned after stripping and inspecting at a cost of \$766.70. The cost of repairs to the 40 boilers was \$328,532.

The total cost of repairs to the 177 locomotives at outside shops was \$3,310,799, while, according to the investigators, the cost of similar or heavier repairs on the same or heavier classes of locomotives in respondent's shops amounted to \$1,397,634. The total excess above the cost of the work in respondent's shops was computed to be \$1,913,165, but for reasons later explained this excess should be reduced to \$1,827,345.

The cost of repairs in the various outside shops is compared below with the costs in respondent's shops as found by our investigators:

Shop	Locomotives	Total cost in outside shops	Total cost in respondent's shops	Total excess	Ratio of cost in outside shops to cost in respondent's shops
American	28	\$424,500	\$229,680	\$194,820	185 to 100
Baldwin	37	743,328	297,280	446,048	250 to 100
Bethlehem	76	1,531,906	581,886	950,020	263 to 100
Bath	15	283,950	132,836	151,114	214 to 100
Bangor & Aroostook	5	58,036	33,115	24,921	175 to 100
New York, Ontario & Western	8	64,213	50,994	13,219	126 to 100
Merchants	4	96,034	32,773	63,261	293 to 100
Portland	4	108,832	39,071	69,761	279 to 100
Total	177	\$3,310,799	\$1,397,634	\$1,913,165	237 to 100

The record indicates that as a result of deferred maintenance in prior years, the depletion of its shop forces in the summer of 1922 following the strike, and the increased traffic demands which, it became evident in the fall of that year, respondent would be obliged to meet, respondent's home shops were incapable of handling promptly all of the necessary repair work, and resort to outside shops was to a certain extent necessary. But was it reasonably necessary, particularly in view of the greatly excessive cost of this outside repair work, to make all the contracts that were made and to continue this work, begun in the summer of 1922, not only through the following fall and winter but through the spring and summer and into the fall of 1923?

The contracts for repairs were in fact divided into two groups under such widely different conditions that they will be separately considered: Group A, made with the American Locomotive Company and the Baldwin Locomotive Works June 29, 1922, just prior to the shopmen's strike, and Group B, made October 31, 1922, and subsequent thereto, with certain other outside concerns.

When the contracts with the American and the Baldwin locomotive companies were made the shopmen's strike, which occurred on July 1, 1922, had been called and respondent had a right to assume that most, if not in fact all, of its shop employees would go on

strike, and that until the strike was settled or a new force recruited its shop output would be correspondingly diminished. The American and Baldwin locomotive companies were responsible concerns, well equipped to repair or rebuild locomotives and turn them out in a reasonable time and in serviceable condition. Under such circumstances prudent management could not be criticized for anticipating future needs and providing for them, even at increased cost if the best terms obtainable were secured. Therefore, no criticism is directed to the contracts executed at this time and with concerns which were properly equipped to perform the work.

An entirely different situation exists, however, with respect to the second group of contracts. With the exception of two foreign railroad shops, the concerns employed were not equipped to handle the work with any degree of efficiency or economy. The Atlantic plant was without rail connections. The Bethlehem plant required changes and additions for which respondent reimbursed it. All driving wheels and axles on locomotives repaired requiring turning or refitting were sent from the Bethlehem plant at Fore River to respondent's Readville shops, and then returned to the Bethlehem plant for assembling. Respondent was required to furnish several of the outside contractors with tools, and its witness admitted that many of the outside shops were inefficient, due to the fact that they were undertaking work with which they were not familiar and which they were not organized to handle properly. The record shows that the shops of respondent were at that time fully manned, the total number of shop employees on November 1 being 5,769 as against 5,521 on June 30. The output was rapidly approaching normal. Substantial additions to locomotive equipment had been made, both by the purchase of new locomotives and by the return of repaired locomotives from the American and Baldwin works. No shortage of power existed, and the testimony of respondent is that by October 24, 1922, a full force of mechanics and helpers had been recruited, and that, so far as it was concerned, the strike was a thing of the past. In spite of this, however, respondent proceeded to make the second group of contracts at approximately two and one-half times the cost of doing the work in its own shops with concerns which respondent knew were not equipped to handle the work promptly or properly, and which in fact did not return any repaired locomotives for months, and some not until the following summer and fall.

Taking all the circumstances into consideration, no criticism is directed to the contracts with the American and Baldwin plants for outside work, notwithstanding the great cost. Whether or not any of the other contracts were justified is debatable. It is clear, however, that much of the repair work performed at excessive cost in outside shops subsequent to November 1, 1922, was unnecessary and without adequate justification. Without attempting to draw the exact line, the record compels us to regard a substantial portion of the extraordinary expenditures incurred by respondent in this outside repair work as improvident and of a character which should be considered when fixing rates to yield the standard return as provided by the act.

## Woodlock Finds Hindsight Better Than Foresight

WOODLOCK, Commissioner, concurring.

Viewing the matter of the New Haven repairs to equipment in the cold, clear light of "hindsight" (being now by several years removed from the somewhat turbulent conditions of 1922), we are no doubt safe in stating that "much of the repair work performed at excessive cost in outside shops subsequent to November 1, 1922, was unnecessary and without adequate justification." We say further, however, that "the record compels us to regard a substantial portion of the extraordinary expenditures incurred by respondent in this outside repair work as improvident and of a character which should be considered when fixing rates to yield the standard return as provided by the act." Upon this latter pronouncement two comments seem to me to be appropriate.

The first is that providence means foresight and improvidence means lack of foresight. In judging a group of human actions in the light of "hindsight" we can, perhaps, with much accuracy, by appraisal of the results, judge those actions to have been either necessary or unnecessary. We can also say whether they were or were not "adequately justifiable" in the light of the results. To say, however, that they were improvident is to enter upon a field which is only in part amenable to "hindsight" exercised several years after the event.

The second comment concerns the concluding words of the report

following the word "improvident," viz., "and of a character which should be considered when fixing rates to yield the standard return as provided by the act." On this point two things suggest themselves. One is that in all human affairs there is constant failure to reach the theoretical standard of performance. Men, on an average, fall somewhat short of this standard in everything they do. They are not perfectly honest *semper et ubique*, they are not perfectly efficient, they are not perfectly economical, they are not perfectly anything. When Congress, therefore, decided to rely upon private management of railroad transportation it did so, or should have done so, with full knowledge that it could get no more than the normal average of human performance, and it was entitled to expect no more than this. The second point concerns the matter of supposed managerial shortcomings as a factor to be considered in rate making. I find some difficulty in visualizing the process by which we are to correct the "fair rate of return" for managerial deficiencies. We are supposed under the law to adjust rates for a regional group of carriers with reference to a group return on group value. Suppose we do find in a given group a carrier whose management is deficient in an unusual degree, how are we to express that deficiency in the group-rate structure so as to penalize only the offending carrier without damage to the others? Is past efficiency or inefficiency of a sporadic type to find punitive reflection permanently in future rates? If not permanently, for how long? And in what rates?

I do not wish in these remarks to suggest that the references in the act to "honest, efficient, and economical management" are mere *brutum fulmen*, or that it is not a part of the task of regulation to take cognizance of failure with respect to this requirement whenever such failure can be clearly recognized and described. In the present case, however, I can concur in the majority report only with the qualifications expressed above.

#### Lewis Objects to Censure

LEWIS, *Commissioner*, dissenting:

Criticism of a carrier by this commission in an investigation such as this amounts to government censure. Such censure is a powerful weapon placed in our hand. It should be used with meticulous care, else its effectiveness when needed be impaired. The bill returned against the New Haven is vague, and in conclusion it is limited to "much of the repair work performed at excessive cost in outside shops subsequent to November 1, 1922."

The report presents an elaborate mechanical survey of mechanical equipment, but there is wholly missing recognition of some conditions and factors which should be included in the investigation and that should be stated. They may throw a different light on the whole presentation and lead to different conclusions. It must be understood that this was an investigation instituted by us, that its scope is not limited, and that if there were improper practices or motives they should be developed by us and set forth in this public document.

The New Haven undoubtedly paid excessive prices for repairs. There may be some question as to whether the basis for comparisons between "shop" and "outside" repairs is accurate, but inasmuch as the majority report does not criticize the Baldwin contract, under which in the summer and fall of 1922 locomotives were repaired on a ratio of 250 per cent of shop costs, it seems that the real issue is justification rather than cost.

It is a notorious fact that the New Haven was physically decrepit, hard up, and hard hit during 1922, and in at least the early part of 1923. This was information that was of such general knowledge that we should not fail to take judicial notice of it. Much of it is contained in records made in hearings before us or in our service files. It was so notorious that it should have attracted the attention of our investigators. In the plea for relief through divisions for the New England lines in the *New England Divisions cases*, fought out before us in 1920 and 1921, the New Haven stuck out like a sore thumb. Ahead of the New Haven, then in serious straits, there loomed up the maturity on April 1, 1922, of the so-called French loan of \$27,582,692, and the concern over the New Haven's ability to meet it was by no means confined to itself. It restricted its expenditures to the limit. It is admitted that the testimony indicates that the condition of power prior to the strike was considerably below normal, that there had been intentionally deferred maintenance for a number of years, and that during the two-year period prior to the strike respondent's shop forces and working hours had been reduced and at times its principal shops had been closed.

Simultaneously with the maturity of the French loan on April 1 the big anthracite coal strike of 1922 began. The mines were shut down during the summer and the coal supply had not been moved to New England when winter came on.

Traffic began to increase in volume in 1922. The carrier, in depleted condition, was face to face with a public demand to render service. The carriers as a whole were being warned that failure now, so closely on the return of their properties to private ownership, would mean government control.

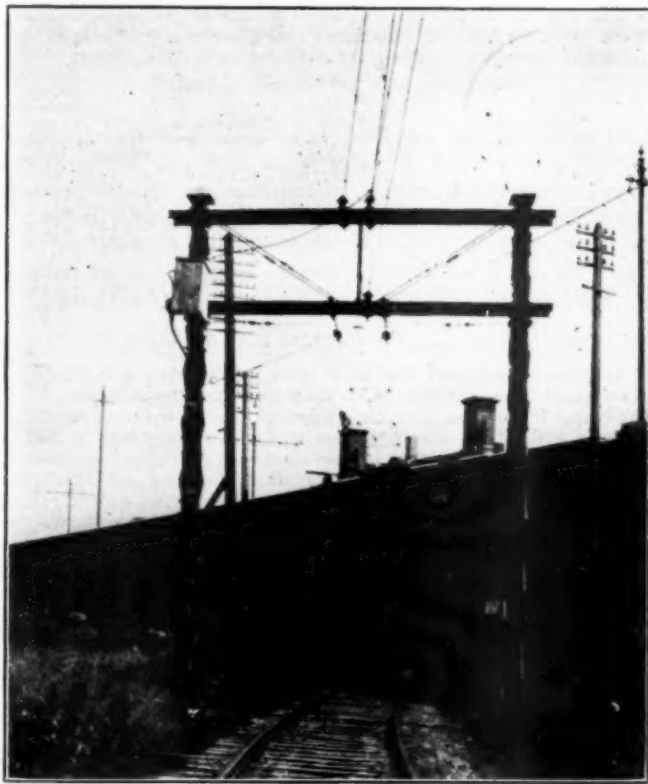
We know that winter actually opened with the New Haven's

rails choked. Embargoes were placed on all except preferred freight. This commission found it necessary to place its service agents on this road and to urge the carrier to extreme exertion. When our agents got there they found in service not only the new engines which the New Haven had purchased to meet the situation, but they also found borrowed engines. The winter was one of unusual severity. New England was not only organized to demand coal but was also demanding service to let it get into the new onrush of commercial and industrial activity which had set in unmistakably. It is doubtful in the light of these conditions if we, who were demanding that the transportation needs be met, are in a position to visit censure on a carrier that was battling as the New Haven was battling to meet the demands on it. In the light of these conditions how are we, for example, justified in bringing under suspicion a large contract the ratio of which was 263 per cent, when we do not criticize the Baldwin contract, which was 250 per cent?

It is possible, as we look at the situation now free of the pressures that existed in New England in 1922, and which caused states and this commission to organize to meet the emergency, to reach the conclusion that more locomotives were sent out for repair than necessary. But what was the motive? There inevitably arises in such cases suspicion that someone may have profited through collusion. No finding of that kind is made. It is difficult to believe that the New Haven officers should immediately after passing the French loan crisis have entered on a policy of wasting its lean assets. If ever a carrier struggled through a financial and operating crisis, the New Haven did it in the year 1922 and at least the first half of 1923. It seems to me that the motive for heavy expenditures and for reconditioning and reequipping motive power might logically, in the absence of a showing to the contrary, be found in the pressures of the public, the states, and the government on it to render service. A closer analysis might reveal that both efficiency and economy, looked at broadly, were served by the course taken by the New Haven to meet its extremities.

I can not, therefore, join in the adoption of a report that leaves so much out that should have been included in our investigation. I refrain from reaching on such a record a conclusion that the New Haven should be voted a service medal; but I do have the conviction that the record is altogether inadequate as it now stands to afford the basis for censure. Also, such censure deals with the dead past, a period of unusual difficulties and impulses, and I see no good to be served by rattling old bones and raising a cloud of suspicion of wrongdoing without being specific as to motives, derelictions if committed, and those responsible.

COMMISSIONER AITCHISON dissents. COMMISSIONER HALL did not participate in the disposition of this case.



Electrified Freight Tunnel Under Buenos Aires



# Economic Factors in the Railway Situation

**T**HE Bureau of Railway Economics on March 19 made a report to the American Railway Association dealing with certain outstanding economic factors in the railway situation in the spring of 1926. The report discusses primarily the capital expenditures made by the railways since 1922, the physical results of those expenditures, and the gradual increase in the efficiency and economy of railway operation. These results have developed in large measure from the effective program for increased efficiency inaugurated by the railways early in 1923, coupled with the hearty co-operations of the shipping public, through the Shippers' Regional Advisory Boards and in many other ways.

Finally, the report states what compensation for their improved service has been received by the railways, in the form of a return on the value of their transportation properties. An abstract follows:

## I. Railway Capital Expenditures, 1922-1925

During the year 1925, according to reports to the Bureau of Railway Economics, the railways of Class I expended \$754,000,000 in the form of capital expenditures for new equipment, improvements to facilities, and extensions. The details appear in Table I. About 45 per cent, or \$339,400,000, went into new equipment in 1925, while the remaining 55 per cent was expended for additions or betterments to roadway and structures. The 45 per cent expended for equipment in 1925 compares with 56 per cent in 1924, and 64 per cent in 1923.

While the total expenditures for 1925 were greater than for 1922, they were not so great as in 1923 or 1924. The total capital expenditures for the four years amounted to \$3,117,000,000, equivalent to an annual average approximating \$780,000,000. The expenditure of \$754,000,000 in 1925 was slightly under the four-year average.

## II. Resulting Benefits from Capital Expenditures

What practical benefits, in the way of physical improvements, increased operating efficiency, and financial return, have the railways and the public received from the expenditure of these vast sums of money, amounting to three-quarters of a billion dollars in 1925 alone, and more than three billions during the past four years?

To answer this question, attention may be directed first toward some of the physical additions made during the four years since 1922. These additions consist primarily of new trackage, new locomotives, and new freight and passenger cars.

It will be noted that the total mileage constructed in 1923, 1924 and 1925, was in each case more than twice as great as the corresponding total for 1922, and that the total of 1,354 miles in 1925 was larger than for any of the other three years.

### New Equipment

With respect to locomotives, a total of 10,105 new units were installed during the four years, whereas 10,962 were retired. There was thus a net decrease in number of units during the period. This apparent decrease in motive power does not, however, tell the story, inasmuch as the new locomotives were of greater weight and far greater power than those retired. The final result, in terms of aggregate tractive power, was a net increase from the

beginning of 1922 to the end of 1925 amounting to 207,203,000 pounds, while the increase in average tractive power per locomotive was from 36,935 pounds in 1922 to 40,625 pounds in 1925.

The extent to which the addition of larger and more powerful locomotives has offset the retirement of older, smaller and less powerful types, is well illustrated by reference to the figures of installations and retirements in 1925. In that year a total of 3,005 locomotives were retired, while only 1,733 new units were installed. Yet the aggregate tractive power of the new units nearly equalled the aggregate power of the retirements, due to the much greater average power of the new locomotives. The 3,005 locomotives retired had an average power of 32,394 pounds each, or an aggregate of 97,344,562 pounds; the 1,733 locomotives installed had an average power of 52,798 pounds, or an aggregate of 91,499,557 pounds.

In the case of freight cars, a larger number were installed than retired during the four years ending with 1925. The net increase was approximately 43,000 cars. As was true of the motive power during the same period, this comparatively small net increase in freight car units by no means indicates the extent to which the railways replaced smaller types of worn out and obsolete freight cars by larger types of modern and up-to-date cars. The net result of the large program of car retirement and replacement carried out by the railways during the four years was an increase in aggregate freight car capacity of 6,986,000 tons, and an increase in average capacity per car from 42.5 tons to approximately 44.7 tons.

Here again, as in the case of the locomotives, the new cars were of greater average capacity than those retired. The result was that the net increase in aggregate freight car capacity was relatively greater than the increase in units. In 1925, for example, the 117,021 freight cars retired had an average capacity of 38.77 tons, or an aggregate of 4,537,287 tons; the 125,760 cars installed had an average capacity of 47.37 tons, or an aggregate of 5,956,930 tons. The net gain in car units during 1925 was only 8,739; the net gain in aggregate capacity was 1,419,643 tons.

The number of passenger-train cars installed and retired during the past four years is also shown. While the number installed exceeded the number retired by a comparatively small margin, yet the newer units were generally of better and larger construction than the older ones retired. The totals for the four years were 9,298 cars installed, and 9,057 cars retired.

The average power per locomotive, and the average capacity per freight car as well, increased steadily from the beginning to the end of the period.

In respect to the aggregate power of the locomotives, the table shows an increase of 8.6 per cent during the four years, although the total number of locomotives actually fell off 1.2 per cent. With regard to the freight cars, their aggregate capacity increased 7.1 per cent, while the number of cars increased only 1.8 per cent.

### Condition of Equipment

Another angle from which this same situation can be approached relates to the physical condition of equipment, particularly the locomotives and freight cars. Retirement of many of the older types of engines and cars has enabled

the railways to reduce the number of breakdowns and minor delays. This, together with the result of the program to improve shop facilities and reduce the proportion of engines and cars in bad order, has made it possible for the railroads to bring their equipment to a better physical condition than at any time for several years past.

This is indicated by the fact that the percentage of unserviceable freight cars, which was reported as high as 13.1 per cent in 1921, was gradually but consistently reduced during the years 1922 to 1925, until it reached an average of 7.7 per cent in 1925. The percentages of unserviceable cars were, respectively:

12.8 per cent in 1922
8.0 per cent in 1923
7.8 per cent in 1924
7.7 per cent in 1925

Similar improvement has been made with respect to the proportion of locomotives in unserviceable condition. Considering the aggregate number of freight and passenger locomotives combined, 23.7 per cent were reported unserviceable in 1921. This increased to 24.9 per cent in 1922, the year in which occurred the strike of railway shopmen. Since then the railroads have made a steady reduction in the unserviceable percentage of locomotives as follows:

24.9 per cent in 1922
21.4 per cent in 1923
18.7 per cent in 1924
17.9 per cent in 1925

#### Reserve Equipment

This improvement in equipment condition, in combination with the increased capacity of the plant and a more efficient basis of operation, put the carriers in the position of having at all times during 1925 a surplus or reserve amount of equipment sufficient to guarantee that, whatever further traffic was offered, the increase could and would be handled with corresponding effectiveness.

Impressive proof of this is furnished by statistical compilations of the Car Service Division, relating to number of stored locomotives and surplus freight cars in good condition throughout the year 1925. Beginning with a total of 4,849 stored locomotives on January 1st, and ending the year with 5,166, at no time during the twelve months did the railways have less than 4,208 locomotives in reserve, while from April to August the reserve ran consistently above 6,000.

Similarly, the year opened with 266,252 surplus freight cars in good physical condition, and closed with 267,739. The minimum number of reserve cars reported during the year was 104,000 while the maximum was 345,000.

#### III. Factors of Efficiency in Railway Operation

While no one factor completely measures the efficiency of railway performance, certain ratios and averages are

commonly regarded as rather significant indications.

A study of these ratios and averages points to the year 1925 as productive of perhaps the most efficient railway performance on record. Certainly, the results were the best for any year of the past six, or since the beginning of 1920.

Table II presents a summary for the six years, in which thirteen ratios of railway performance are shown. The table does not include statistics of unserviceable cars and locomotives, which have already been presented.

Careful scrutiny of the performance ratios of Table II indicates clearly the extent to which the year 1925 led most of its preceding years in operating efficiency. The

TABLE II  
Performance Ratios  
(Class I Roads)

Item	1925	1924	1923	1922	1921	1920
<b>Freight Service</b>						
Performance:						
Freight car-miles per car day.....	28.3	26.8	27.8	23.5	22.4	25.1
Net ton-miles per car day.....	493	471	510	424	389	498
Net tons per loaded car.....	27.0	27.0	27.9	26.9	27.6	29.3
Net tons per train.....	744	715	713	676	651	708
Gross tons per train (excl. loco. and tender).....	1,670	1,588	1,539	1,464	1,435	1,443
Freight cars per train.....	43.8	41.7	39.9	38.4	38.4	36.6
Freight train speed (miles per hour).....	11.8	11.5	10.9	11.1	11.5	10.3
Freight locomotive-miles per locomotive day.....	58.2	55.3	60.3	52.0	49.5	65.3
Net ton-miles per train hour.....	8,773	8,222	7,770	7,479	7,506	7,302
Gross ton-miles per train hour (excl. loco. and tender).....	19,679	18,257	16,764	16,188	16,555	14,877
Fuel consumption per 1,000 gross ton-miles (excl. loco. and tender) (pounds).....	159	170	183	186	185	197
<b>Passenger Service</b>						
Performance:						
Passenger locomotive-miles per locomotive day.....	110.3	108.5	108.6	101.7	103.4	116.6
Fuel consumption per passenger train car-mile (pounds).....	16.1	17.0	18.1	17.9	17.7	18.8

maximum result attained for each factor during the six years is indicated in italics in the table. In the case of nine of the thirteen factors shown, the result for 1925 was the best. In the remaining four cases, the year 1925 was second once, was third twice, and tied once for fourth position.

The freight car miles per car day in 1925 were greater than in any previous year. The same was true of gross and net tons per train, number of freight cars per train, average freight train speed, gross and net ton-miles per train hour, and fuel consumption per unit in both freight and passenger service.

With regard to net ton-miles per car day, the year 1925 stood third to 1923 and 1920; in freight locomotive-miles per day, it stood third to 1920 and 1923; in passenger locomotive-miles per locomotive day, the average for 1925 was second only to 1920. Only in the factor of net tons per loaded car did the year 1925 show to disadvantage.

TABLE I

Item	CAPITAL EXPENDITURES—CLASS I ROADS	1923	1922	Total—4 years
	1925*	1924		
<b>Equipment:</b>				
Locomotives.....	\$62,000,000	\$102,456,404	\$208,966,280	\$414,794,359
Freight train cars.....	219,900,000	318,570,882	409,664,895	1,124,836,687
Passenger train cars.....	42,525,000	53,133,583	40,105,358	153,806,973
Other equipment.....	14,975,000	19,447,591	22,987,458	66,803,233
<b>Total—Equipment.....</b>	<b>\$339,400,000</b>	<b>\$493,608,460</b>	<b>\$681,723,991</b>	<b>\$1,760,241,252</b>
<b>Roadway and Structures:</b>				
Additional track†.....	147,725,000	116,725,143	108,745,245	423,522,362
Heavier rail.....	32,870,000	32,037,372	27,865,942	109,648,098
Additional ballast.....	11,820,000	10,824,944	9,471,311	37,536,687
Shops and engine houses‡.....	31,790,000	39,833,581	51,214,185	136,472,923
All other improvements.....	190,395,000	181,713,728	180,128,752	649,744,168
<b>Total—Roadway and structures.....</b>	<b>\$414,600,000</b>	<b>\$381,134,768</b>	<b>\$377,425,435</b>	<b>\$1,356,924,238</b>
<b>Grand total.....</b>	<b>\$754,000,000</b>	<b>\$874,743,228</b>	<b>\$1,059,149,426</b>	<b>\$3,117,165,490</b>

\*Partially estimated to include 6% of mileage not reporting.

†Includes rail and tie fastenings and other track material.

‡Includes machinery and tools.



its average being the same as in 1924, only one-tenth of one ton greater than in 1922, and lower than in any of the other years. This factor, it must be recognized, is one over which the railways have not complete control.

Perhaps the most marked advances made in 1925 were in the conservation of fuel, in tons per train, and in ton-miles per train hour. The result of the improvement in fuel consumption was so marked that it is discussed in another section of this report.

**Tons per train.**—Gross tons per train in 1925 increased 5.2 per cent over 1924, and 15.7 per cent over 1920, while net tons per train showed increases of 4.1 per cent over 1924 and 5.1 per cent over 1920. These gains were particularly noteworthy, in view of the fact that the average load per car in 1925 was no greater than in 1924, and was actually less than in 1920.

**Ton-miles per train hour.**—This average, in which both the train-load and the average speed with which a train is handled from terminal to terminal are factors, showed a substantial advance in 1925. Gross ton-miles per train hour were greater by 7.8 per cent than in 1924, and greater by 32.3 per cent than in 1920. Net ton-miles per train hour increased 6.7 per cent over 1924, and 20.1 per cent over 1920.

#### Conservation of Fuel

The year 1925 recorded the most effective use of locomotive fuel. The fuel conservation program since 1920 has been so successful that special attention is here directed to it. Fuel consumption per unit in the freight train service was reduced 6.5 per cent from 1924 to 1925, and 19.3 per cent from 1920 to 1925.

In freight service the amount of fuel consumed per thousand gross ton-miles was 159 pounds in 1925, a decrease of 38 pounds under 1920, and 11 pounds under 1924, the next best year.

In passenger service the amount of fuel consumed per passenger train car-mile in 1925 was 16.1 pounds, a decrease of 2.7 pounds under the average for 1920, and 0.9 of one pound under 1924.

Based on the volume of traffic handled by the railways in 1925, the actual saving in tons of fuel consumed in freight and passenger service, due solely to better use of fuel, amounted to 24,467,115 tons compared with 1920, and 7,302,797 tons compared with 1924. The value of this tonnage, at the prevailing average price of 1925, was \$73,401,000 for the savings under 1920, and \$21,908,000 for the savings under 1924. These savings, be it emphasized, were due entirely to increased efficiency in use.

#### Loss and Damage Freight

The year 1925 again showed improvement in payments for loss and damage to freight. There has been a consistent reduction in the loss and damage freight expenditures since the peak of 1920. The expenditure for 1925, which fell somewhat below \$40,000,000, represents a reduction of two-thirds under the corresponding figure for 1920, when it amounted to approximately \$120,000,000. These results have been attained only through the persistent individual and collective efforts of railways and railway organizations, combined with fine co-operation from the great body of shippers.

#### IV. Financial Results

The following table gives the rate of return earned by railways of Class I during the five complete years since the passage of the Transportation Act, or 1921 to 1925, inclusive. This return is computed both on the basis of the property investment as shown on the books of the carriers (including road and equipment, materials and

supplies, and cash), and on the aggregate lump-sum value of railway property tentatively found by the Interstate Commerce Commission in 1920, brought up to date year by year through the addition of the net annual increases in capital investment. It will be recalled that the "fair return" contemplated in the Act was set by the Commission at 6 per cent during the period to March 1, 1922, and was then reduced to 5.75 per cent.

#### Rate of Return

(Class I roads and large switching and terminal companies.)

Year	Actual rate earned on	
	Property Investment	Tentative Valuation
1921	2.92%	3.33%
1922	3.61	4.14
1923	4.48	5.22
1924	4.33	5.01
1925	4.83	5.63

It will be seen from this table that in no year have the railways as a whole earned a "fair return" on tentative valuation, but that in every year they have suffered a substantial shortage under that return. The aggregate shortage for the five-year period, under the amount regarded by the Commission as a fair return according to the terms of the Act, was \$1,068,000,000, or more than \$200,000,000 per year.

Had railroad efficiency been less than it was in 1925, the failure to earn 5.75 per cent on the valuation basis would have been by a much wider margin. On the basis of the property investment accounts of the carriers, the rate of return has never reached 5 per cent, being only 4.83 per cent at its highest point, which was the average for 1925.

## Report on Collision at Frontenac, Fla.

**R**EPORT No. 1241 of the Interstate Commerce Commission, signed by W. P. Borland, director of the Bureau of Safety, gives a summary of the investigation by the Bureau of a rear collision of northbound passenger trains which occurred on the Florida East Coast, at Frontenac, Fla., on January 10, at 9:41 a.m. resulting in the death of the fireman of train No. 86, and two Pullman Company employees; and the injury of 21 passengers, one news agent and six employees.

This collision occurred on a double track line, where no block system is in use. The train wire is operated by telephone. Station operators are required to put the train order signal in the stop position for 10 minutes after the passage of each train. Northbound passenger trains Numbers 76, 36 and 86, all of them long and heavy, had passed City Point, four miles south of Frontenac, within a period of 11 minutes. Number 36, with 17 cars, was stopped at Frontenac because too close to the preceding train. Nearly the whole of the train ran past the signal; after standing about six minutes it had just started, when No. 86 ran into it. All of the cars in both trains were of steel, but the private car at the rear of No. 36 was crushed at both ends and the first car in No. 86 was badly crushed.

The flagman of No. 36 went back and placed a fusee but he did not go far enough. Because of a curve to the left and the presence of a southbound train on the southbound track, the view from the engine of No. 86 was short, and the first warning had by the engineman was

the call from the fireman that he saw the fusee. The air brakes were at once applied, but the train struck No. 36 at about 25 miles an hour. The engineman testified that the fireman, so far as he could judge, had been keeping a good look-out. Two men on the southbound train, having noted the danger, gave hand motions to No. 86 but these motions were not seen.

The operator at City Point, noting that No. 36 was running slowly, did not set the train order signal against it, though he says that he signaled to the engineman by hand to indicate that No. 76 was a short distance ahead. He had heard operators south of him saying that 86 was 14 minutes behind 36. Following this he went out to gather some fuel to start a fire, and so, when No. 86 arrived earlier than he expected, he did not have time to set the train order signal against it.

The report narrates circumstances indicating that the maintenance of the 10-minute time interval is not always faithfully attended to.

The conclusion of the report puts the responsibility on the flagman of 36 and the operator at City Point. The flagman claims that he went back as far as the time would allow, but the inspector does not accept the statement. Under Rule 467, Train 36, being on a curve, should have been moved forward to wait for its flagman, but this rule was not complied with.

Continuing, the report says that there are on this line, 12 daily first class trains in each direction, often running in two or more sections, and an average daily movement of 10 freight trains in each direction, in addition to which several work trains are in service. "Safety of operation under such conditions requires the establishment of some form of block signal system. There are sufficient open offices to provide for the installation of a manual block system; and a block system either of this or of some other type should be placed in operation at the earliest practicable date." This report is dated March 18.

## Freight Car Loading

WASHINGTON, D. C.

**R**EVENUE freight car loading in the week ended March 27 amounted to 967,838 cars, an increase of 35,069 cars as compared with that for the corresponding week of last year and of 60,449 cars as compared with 1924. However, this was a decrease of over 9,000 cars as compared with the week before, due principally to a falling off in coal loading. For the first 13 weeks of 1926 the loading has been 11,985,598 cars, an increase of 203,189 cars over that for last year. Increases as compared with last year were reported in all districts except the Southern, which showed a slight decrease, and in all commodity classifications except forest products and ore. Coal loading showed an increase of 29,264 cars as compared with last year. The summary, as compiled by

the Car Service Division of the American Railway Association, follows:

### REVENUE FREIGHT CAR LOADING, WEEK ENDED SATURDAY, MARCH 27, 1926

Districts	1926	1925	1924
Eastern	237,646	225,983	226,691
Allegheny	197,619	192,667	194,019
Poconantas	50,217	41,026	36,659
Southern	158,741	158,968	146,842
Northwestern	117,478	114,789	113,725
Central Western	140,548	134,466	127,653
South Western	65,589	64,870	61,800
Total Western Districts	323,615	314,125	303,178
Total All Roads	967,838	932,769	907,389
Commodities			
Grain and grain products	38,312	35,015	35,823
Live stock	27,343	26,685	28,601
Coal	171,413	142,149	154,649
Coke	13,297	12,254	12,518
Forest products	77,921	81,942	82,113
Ore	11,262	12,875	13,849
Mdse. L. C. L.	267,593	262,899	251,162
Miscellaneous	360,697	358,950	328,654
March 27	967,838	932,769	907,389
March 20	977,209	911,481	908,390
March 13	967,411	926,119	916,762
March 6	964,681	932,044	929,381
February 27	912,658	864,096	944,514
Cumulative total, thirteen weeks	11,985,598	11,782,409	11,583,011

The freight car surplus for the period March 15-22 averaged 213,780 cars, including 79,551 coal cars and 88,180 box cars. The Canadian roads for the same period had a surplus of 24,775 cars, including 20,000 box cars and 200 coal cars.

### Car Loading in Canada

Another substantial gain in car loadings was recorded by Canadian railways for the week ended March 20, in comparison with the previous week. Unlike previous gains, the increase this week was reported in Eastern and not in Western Canada. Most of the great gains in car-loadings in Canada during the past six months are attributable to the heavy crop in Western Canada in 1925, which has been moving eastward steadily during the winter months and which will not be cleared up until late this spring. This week, however, shows a marked advance in eastern loadings, particularly in pulpwood, merchandise, and miscellaneous freight.

The net increase in the east was 2,964 cars and in the west 401 cars, making a total for all Canada of 3,365 cars.

Compared with the corresponding week of 1925 there was an increase this year of 3,632 cars, of which merchandise and miscellaneous freight accounted for the greater part.

Comparative statistics with the cumulative totals for the year, are as follows:

Commodities	Total for Canada			Cumulative Totals to Date	
	March 20 1926	March 13 1926	March 21 1925	1926	1925
Grain and grain products	5,696	6,266	6,942	79,025	73,109
Live stock	2,263	2,114	2,286	22,429	24,784
Coal	3,266	4,170	3,310	53,767	58,469
Coke	406	283	252	5,575	3,598
Lumber	3,920	3,285	3,025	34,736	31,911
Pulpwood	4,046	3,327	4,039	43,856	45,974
Pulp and Paper	2,552	2,615	2,097	29,439	24,047
Other forest products	3,729	3,541	3,521	39,781	37,915
Ore	1,416	1,386	1,286	15,713	12,944
Merchandise, l. c. l.	16,482	15,300	15,122	161,685	154,221
Miscellaneous	13,218	11,342	11,482	120,144	110,565
Total cars loaded	56,994	53,629	53,362	606,150	577,537
Total cars received from connections	41,526	40,481	33,584	401,818	374,960



One of 250 New Great Northern 50-ft. All-Steel Flat Cars Designed for the Shipment of Long Timbers from the West



# General News Department

The shops of the Pennsylvania at Pitcairn, Pa., were damaged by fire on April 2, to the estimated extent of \$150,000. The tin shop and the air brake shop, with all their machinery, were destroyed, the burned-over area aggregating about 60,000 square feet.

The National Safety Council on April 6 dedicated a bronze memorial in honor of R. C. Richards, one of the founders of the safety-first movement on the railroads of America. The memorial was placed in the waiting room of the Chicago & North Western terminal at Chicago.

The Chicago, Rock Island & Pacific has contracted with the Metropolitan Life Insurance Company of New York for group life insurance for the benefit of all its officers and employees who have been in the service of the company for six months or more. About 30,000 employees are eligible.

Stating that "the emergency has been measurably relieved" the Interstate Commerce Commission has vacated as of midnight, April 8, its service order No. 43, issued on December 28, 1925, by which it directed the railroads serving Florida to handle traffic via the most available routes, regardless of shippers' routing orders or their own usual arrangements.

The St. Louis Railway Club at its meeting on April 9 elected officers as follows: President, W. E. Williams, manager of the department of personnel of the Missouri-Kansas-Texas; first vice-president, E. H. Harman, assistant to the general manager of the Terminal Railroad Association of St. Louis; second vice-president, R. J. Lockwood of the United Railways; and secretary-treasurer, B. W. Frauenthal (re-elected).

Proposed modifications of the government regulations for the transportation of explosives and other dangerous articles will be the subject of a hearing to be held by the Interstate Commerce Commission at Washington, on April 21, before director W. P. Bartel. Under the provisions of the law, the commission acts on recommendations made by the Bureau of Explosives, and the hearing will be confined to these recommendations. A representative of the Bureau of Explosives will be at Washington on April 20, to confer with parties interested in matters to be discussed.

## Women Act as Crossing Guards

Six women have been employed as highway crossing guards on the St. Louis division of the Pennsylvania since October, 1918, and their records are characterized as perfect. During this time no accidents have occurred at the crossings at which they are stationed. Two sisters are located at Terre Haute, Ind., and the daughter of a retired railroad foreman is located at Jewett, Ill. The others are at Highland, Ill., Teutopolis and Collinsville.

## Fuel Budgeted on the B. & M.

The Boston & Maine, in an effort to further increase its fuel savings which amounted to 42,236 net tons in 1925 as compared with 1924, has established a budget system, by which coal consumption is measured by operating divisions in tons and pounds per unit of service. Each division superintendent is responsible for his share of the coal budget, the figures of which are based on a reduction of five per cent from the consumption unit of last year.

## Freight Container Bureau, Annual Report

Edward Dahill, Jr., chief engineer of the Freight Container Bureau, 30 Vesey street, New York, has issued his first annual report covering the time from February, 1925, when the bureau was separated from the Bureau of Explosives, to the end of the calendar year. Conferences which have been held with executives

and traffic officers of railroads, shippers and manufacturers number nearly a thousand, and the total number of cars of fruit, furniture, crockery and other commodities inspected has been 220. The twentieth circular issued by the bureau on subjects connected with crating, packing, etc., was issued on January 1 last, dealing with crates for cook stoves.

The present report presents three new subjects: Appendix No. 1, Packing and Loading Georgia Peaches; Appendix No. 2, Packing and Crating New Furniture; Appendix No. 3, Casks and Barrels for Pottery.

## N. Y. C. Asks Dismissal of Sprague Complaint

Dismissal of the complaint of the Sprague Safety Control and Signal Corporation, which alleged violation of the Clayton law, is asked by the New York Central in a brief filed with the Interstate Commerce Commission on April 7, following extensive hearings several weeks ago on the complaint. The complaint charged that the automatic train control device being installed by the New York Central was not in compliance with the commission's specifications and that there was an interlocking relation between the railroad and the General Railway Signal Company.

After discussing the question of specifications the brief says that H. S. Balliet, signal engineer, who, it was testified at the hearing, held ten shares of stock of the signal company, "had nothing to do with the making of the contract with the General Railway Signal Company or with the selection of the General Railway Signal Company's device. That was selected by the responsible operating officers of the company. It is submitted that no case has been made against the respondent railroad company or against any of its officers or directors which could in any way bring the transaction of which complaint is made within the purview of section 10 of the Clayton act.

"A fact which seems to have considerable bearing upon the question is that the device for which a contract has been made and which is now being installed, is one manufactured only by the General Railway Signal Company under patents owned and controlled by it and by its licensee, the Union Switch & Signal Company. No one but the two companies named was, in July, 1925, in a position to furnish such a system and advertising for bids upon such a system would have been a waste of time and a superfluous expense."

## A. R. A. Safety Program for May

L. G. Bentley, chairman of the committee on publicity and education of the Safety section of the American Railway Association, has issued circular No. 116, giving the schedule of activities for the month of May as prescribed at the annual meeting; the two subjects for this month being (1) accidents connected with the operation of steam shovels, pile drivers, etc., and (2) casualties due to freight shifting on the floors of cars due to sudden stopping or slackening of the speed of cars. The casualty lists are not very long under either of these heads but the committee, setting forth the principal points to be observed in the discipline of men subject to these risks, calls attention to the importance of preserving property as well as life and limb.

Mr. Bentley says that the proposal to reduce the totals of all railway casualties by the end of the year 1930 at least 35 per cent, as compared with 1923, has been accomplished thus far; the figures for both 1924 and 1925 showing reductions. Counting all persons killed or injured the totals are:

	Killed	Injured	Total man hours (thousands)	Casualties per million man hours
Year 1923 .....	7,385	171,712	4,856,983	36.87
Year 1925 .....	6,766	137,407	4,448,375	32.41
Decrease .....	619	34,305	408,608	4.46
Per cent of decrease....	8	20	8	12

The victory was not as decisive as desired, for the improvement is no doubt due in part to the reduction of man hours and the consequent elimination from the service of inexperienced men.

## REVENUES AND EXPENSES OF RAILWAYS

MONTH OF FEBRUARY AND TWO MONTHS OF CALENDAR YEAR 1926

Name of road	Average mileage operated during period.	Operating revenues			Operating expenses			Operating ratio.	Net from railway operation.	Operating income (or loss).	Net after rents.	Net after rents, 1925.
		Freight.	Passenger.	Total (inc. misc.)	Maintenance of way and structures.	Equipment.	Traffic.	Trans- portation.				
Akron, Canton & Youngstown.....	Feb. 171	\$237,019	\$399	\$238,418	\$48,164	\$26,526	\$11,018	\$76,977	\$176,572	\$52,934	\$21,817	\$34,450
Albama & Vicksburg.....	2 mos. 171	469,373	853	470,226	92,812	56,110	23,311	156,125	353,211	104,675	39,683	66,544
Albama & Vicksburg.....	Feb. 141	210,309	45,975	256,284	50,783	31,276	10,164	103,148	183,756	13,490	16,206	38,386
Albama & Vicksburg.....	2 mos. 141	407,883	104,565	512,448	93,591	100,106	20,499	100,717	297,759	45,249	48,719	87,377
Albama & Vicksburg.....	Feb. 188	267,189	47,213	314,402	59,601	56,407	13,327	125,225	167,971	37,476	21,436	18,879
Albama & Vicksburg.....	2 mos. 188	552,437	107,193	659,630	120,456	126,141	26,851	264,865	352,011	104,675	51,119	19,563
Albama & Vicksburg.....	Feb. 253	312,009	42,892	354,901	74,623	39,609	19,707	137,803	215,194	78,644	10,692	14,772
Albama & Vicksburg.....	2 mos. 253	845,925	51,356	897,281	192,635	190,876	21,480	404,034	692,332	185,256	153,759	113,632
Albama & Vicksburg.....	Feb. 9,219	9,466,443	3,195,172	12,661,615	1,700,420	3,008,395	362,887	4,614,058	9,957,177	2,602,508	2,698,569	2,696,883
Albama & Vicksburg.....	2 mos. 9,219	19,395,928	6,596,762	25,992,690	3,278,247	6,121,808	714,183	9,734,409	20,462,091	5,310,067	5,470,079	5,582,162
Albama & Vicksburg.....	Feb. 1,908	1,673,875	203,773	1,877,648	517,317	441,056	1,186,51	703,464	1,174,739	128,152	22,766	32,930
Albama & Vicksburg.....	2 mos. 1,908	3,439,844	471,727	3,911,571	904,231	898,567	102,718	1,485,801	2,425,770	462,580	255,639	81,128
Albama & Vicksburg.....	Feb. 923	711,648	106,439	818,087	63,534	173,348	9,972	236,113	17,077	306,084	262,192	188,707
Albama & Vicksburg.....	2 mos. 923	1,481,556	241,921	1,723,477	126,406	349,555	20,226	504,851	1,203,403	681,163	589,108	577,718
Albama & Vicksburg.....	Feb. 93	160,060	67,618	227,678	31,821	44,173	11,236	94,799	108,187	46,634	33,538	37,339
Albama & Vicksburg.....	2 mos. 93	304,599	143,092	447,691	72,287	85,173	21,718	186,650	260,973	83,270	52,453	42,497
Albama & Vicksburg.....	Feb. 133	191,369	64,515	255,884	27,668	54,699	11,807	87,014	168,866	71,845	65,031	63,023
Albama & Vicksburg.....	2 mos. 133	351,927	136,231	488,158	62,309	107,273	23,139	174,055	314,819	114,020	74,869	104,467
Albama & Vicksburg.....	Feb. 639	389,139	38,091	427,230	94,829	86,998	27,455	174,953	252,275	77,271	23,284	7,289
Albama & Vicksburg.....	2 mos. 639	767,682	86,403	854,085	189,247	176,059	53,756	353,673	500,411	120,812	34,639	2,064
Albama & Vicksburg.....	Feb. 4,924	5,801,738	2,596,618	8,398,356	1,102,424	2,421,212	206,313	3,527,978	4,870,382	1,317,474	1,317,474	1,317,474
Albama & Vicksburg.....	2 mos. 4,924	11,405,534	5,275,978	16,681,512	2,212,424	5,242,424	403,613	7,439,802	9,241,710	2,434,434	2,434,434	2,434,434
Albama & Vicksburg.....	Feb. 342	296,789	20,417	317,206	78,102	47,011	6,921	140,748	276,464	15,241	15,241	15,241
Albama & Vicksburg.....	2 mos. 342	606,235	44,980	651,215	145,587	83,322	13,641	281,686	569,534	33,038	73,958	91,727
Albama & Vicksburg.....	Feb. 5,294	14,729,314	1,925,994	16,655,308	2,300,230	4,188,683	384,630	7,023,623	12,631,685	2,249,610	2,000,506	1,800,482
Albama & Vicksburg.....	2 mos. 5,294	30,913,034	4,171,390	35,084,424	4,609,736	8,595,463	770,108	14,459,122	20,625,302	5,653,260	5,082,131	4,950,509
Albama & Vicksburg.....	Feb. 80	.....	.....	.....	54,890	55,310	3,787	325,077	106,626	462,539	178,322	125,780
Albama & Vicksburg.....	2 mos. 80	.....	.....	.....	107,273	107,273	23,139	174,055	252,275	77,271	23,284	7,289
Albama & Vicksburg.....	Feb. 23	201,030	96,135	297,165	47,212	30,424	2,063	103,967	269,791	133,883	37,329	35,107
Albama & Vicksburg.....	2 mos. 23	402,060	192,270	594,330	94,426	55,247	4,036	212,937	381,393	176,456	31,375	30,777
Albama & Vicksburg.....	Feb. 615	486,644	65,058	551,702	117,280	111,017	4,058	177,702	433,922	131,970	11,410	23,953
Albama & Vicksburg.....	2 mos. 615	1,044,510	139,303	1,183,813	229,213	236,471	8,733	357,253	846,560	249,932	296,946	373,166
Albama & Vicksburg.....	Feb. 32	.....	.....	.....	31,349	49,403	3,410	284,830	9,717	378,709	162,944	128,649
Albama & Vicksburg.....	2 mos. 32	633,906	15,368	649,274	113,898	113,898	6,697	581,413	19,274	789,593	324,763	258,566
Albama & Vicksburg.....	Feb. 228	.....	.....	.....	49,259	285,768	13,282	249,933	32,969	76,372	7,250	156,183
Albama & Vicksburg.....	2 mos. 228	1,235,183	33,013	1,268,196	104,233	620,773	28,052	515,427	65,366	1,344,562	107,259	314,297
Albama & Vicksburg.....	Feb. 33	40,391	41,828	82,219	7,401	10,890	1,369	10,117	4,675	34,622	12,316	17,309
Albama & Vicksburg.....	2 mos. 33	80,777	89,474	170,251	14,690	17,407	3,719	21,407	66,435	1,183	32,404	28,935
Albama & Vicksburg.....	Feb. 2,276	3,602,120	1,718,939	5,321,059	832,495	1,134,896	62,739	2,648,799	4,240,090	772,547	480,752	671,638
Albama & Vicksburg.....	2 mos. 2,276	7,187,221	3,365,461	10,552,682	1,461,703	2,412,700	131,286	5,534,584	483,592	1,526,465	1,026,502	1,070,717
Albama & Vicksburg.....	Feb. 9	104,431	111,251	215,682	5,910	10,150	78	43,730	6,038	65,606	40,252	42,410
Albama & Vicksburg.....	2 mos. 9	211,958	226,993	438,951	12,551	20,161	714	88,133	11,822	133,381	81,186	79,416
Albama & Vicksburg.....	Feb. 253	94,457	2,713	97,170	25,950	38,139	1,655	33,795	8,811	108,350	4,085	39,076
Albama & Vicksburg.....	2 mos. 253	183,403	5,767	189,170	51,768	73,234	3,732	67,269	16,897	212,900	4,843	85,512
Albama & Vicksburg.....	Feb. 601	1,225,130	100,178	1,325,308	110,025	391,304	30,138	508,891	38,708	1,081,226	290,283	184,954
Albama & Vicksburg.....	2 mos. 601	2,520,867	217,288	2,738,155	235,617	83,384	57,754	1,050,939	74,273	2,470,497	565,235	374,110
Albama & Vicksburg.....	Feb. 233	256,661	27,584	284,245	42,830	54,253	4,192	115,797	3,316	200,528	70,878	50,640
Albama & Vicksburg.....	2 mos. 233	513,432	59,571	573,003	104,040	108,327	9,740	263,278	6,644	431,229	116,183	107,143
Albama & Vicksburg.....	Feb. 1,917	1,790,712	552,831	2,343,543	378,117	434,544	75,023	936,595	97,994	1,938,588	508,708	400,278
Albama & Vicksburg.....	2 mos. 1,917	3,415,003	1,184,834	4,599,837	756,028	868,566	141,745	1,922,976	197,164	3,899,800	808,487	619,674
Albama & Vicksburg.....	Feb. 690	2,632,917	673,023	3,305,940	364,247	819,954	36,822	1,761,939	120,346	3,423,337	80,578	441,215
Albama & Vicksburg.....	2 mos. 690	5,213,506	1,366,125	6,579,631	749,659	1,851,826	71,493	3,447,123	279,838	6,440,306	—11,635	1,021,246
Albama & Vicksburg.....	Feb. 433	443,000	116,000	559,000	122,850	110,775	13,757	310,416	512,813	105,653	77,892	12,951
Albama & Vicksburg.....	2 mos. 433	896,635	224,900	1,121,535	222,259	217,110	28,127	630,732	47,969	1,049,703	154,110	129,226
Albama & Vicksburg.....	Feb. 2,632	8,534,194	1,616,721	10,150,915	1,334,036	2,546,696	108,902	2,823,846	7,066,601	4,281,861	2,093,142	1,764,047
Albama & Vicksburg.....	2 mos. 2,632	17,613,631	4,156,971	21,770,602	2,673,943	5,108,654	218,035	6,058,923	4,601,503	14,818,886	4,392,122	3,688,026
Albama & Vicksburg.....	Feb. 1,055	1,571,925	484,614	2,056,539	194,838	575,562	68,241	878,249	53,585	1,762,275	218,677	206,966
Albama & Vicksburg.....	2 mos. 1,055	3,143,850	969,228	4,113,078	416,796	1,208,585	131,365	1,875,722	306,445	3,807,233	376,056	369,139
Albama & Vicksburg.....	Feb. 945	1,635,009	351,189	1,986,198	183,693	655,267	76,315	1,024,471	170,196	1,815,984	62,326	2,891
Albama & Vicksburg.....	2 mos. 945	3,270,018	702,378	3,972,396	361,211	1,368,391	153,148	1,785,683	340,331	3,632,762	120,657	260,405
Albama & Vicksburg.....	Feb. 8,454	7,562,411	1,946,844	9,509,255	1,162,421	2,468,757	167,648	4,412,716	3,274,900	6,234,816	1,196,308	341,090
Albama & Vicksburg.....	2 mos. 8,454	15,124,822	3,893,688	19,018,510	2,324,842	4,937,514	335,296	8,825,432	11,693,072	18,913,384	3,392,616	2,582,180
Albama & Vicksburg.....	Feb. 9,404	8,955,000	1,922,070	10,877,070	972,683	2,700,136	230,787	9,204,615	6,644,303	12,550,918	2,202,845	1,345,683
Albama & Vicksburg.....	2 mos. 9,404	18,281,499	3,857,832	22,139,331	2,945,366	6,405,272	468,131	18,149,417	17,965,131	4,184,244	4,105,423	3,165,247
Albama & Vicksburg.....	Feb. 1,496	1,388,521	267,193	1,655,714	163,774	371,568	65,734	751,604	56,230	1,421,031	140,914	154,231
Albama & Vicksburg.....	2 mos. 1,496	2,842,043	566,382	3,408,425	326,156	778,805	135,460	1,525,845	1,151,440	3,007,572	252,358	231,978
Albama & Vicksburg.....	Feb. 647	1,078,915	173,856	1,252,771	114,920	204,024	35,296	822,868	55,828	1,208,696	183,029	183,029
Albama & Vicksburg.....	2 mos. 647	2,183,776	366,644	2,550,420	234,934	628,874	67,633	1,094,664	71,380	2,124,789	569,692	297,607



## REVENUES AND EXPENSES OF RAILWAYS

MONTH OF FEBRUARY AND TWO MONTHS OF CALENDAR YEAR 1926—(CONTINUED)

Name of road	Average mileage operated during period	Operating revenues				Operating expenses				Operating ratio	Net from railway operation	Operating income (or loss)	Net after rents, 1925.
		Freight	Passenger	Total	(inc. misc.)	Traffic	Trans- portation	General	Total				
Chicago, Milwaukee & St. Paul.....	Feb. 1, 205	\$8,929,569	\$1,441,413	\$11,370,982	\$3,039,433	\$208,249	\$4,639,755	\$321,740	\$5,451,495	81.7	\$2,114,306	\$1,362,488	\$1,033,745
Chicago, Peoria & St. Louis.....	Feb. 215	18,229,102	3,107,323	21,336,425	2,431,792	453,823	9,744,878	666,760	10,411,638	83.2	3,952,651	2,472,599	2,409,815
Chicago River & Indiana.....	Feb. 19	.....	.....	.....	.....	.....	.....	.....	.....	99.0	.....	.....	.....
Chicago, Rock Island & Pacific.....	Feb. 753	6,820,880	1,660,858	8,481,738	1,116,603	225,912	3,738,451	295,503	4,033,954	66.5	3,613,339	282,581	518,333
Chicago, Rock Island & Gulf.....	Feb. 458	359,495	78,037	437,532	73,722	19,090	189,396	16,297	205,693	78.0	107,642	89,550	64,110
Chic., St. Paul, Minn. & Omaha.....	Feb. 1,841	1,451,383	382,203	1,833,586	241,919	34,798	904,371	71,935	1,076,306	85.7	283,358	164,878	125,319
Cincinnati, Indianapolis & Western.....	Feb. 347	312,654	22,364	335,018	31,845	16,071	154,610	15,610	169,220	85.9	49,913	34,831	21,109
Clinchfield.....	Feb. 309	1,264,886	25,995	1,290,881	1,345,908	22,284	137,683	18,172	155,855	66.3	213,517	153,517	268,733
Colorado & Southern.....	Feb. 1,056	743,328	103,262	846,590	933,063	13,611	353,738	40,519	394,257	78.7	198,719	134,623	113,865
Ft. Worth & Denver City.....	Feb. 1,056	1,568,645	225,969	1,794,614	1,948,542	2,993	767,296	83,321	850,617	79.3	407,687	280,044	230,476
Wichita Valley.....	Feb. 271	99,564	15,059	114,623	14,724	.....	.....	.....	.....	55.5	54,254	44,595	25,195
Columbus & Greenville.....	Feb. 167	125,030	22,019	147,049	43,867	3,503	767,296	83,321	850,617	82.7	270,063	25,561	9,413
Delaware & Hudson.....	Feb. 881	2,039,067	280,903	2,319,970	2,472,012	67,689	1,156,584	138,214	1,294,798	84.9	47,076	44,039	11,895
Delaware, Lackawanna & Western.....	Feb. 992	3,724,319	998,691	4,723,010	5,423,099	96,933	2,244,946	287,220	2,532,166	100.1	.....	.....	.....
Denver & Rio Grande Western.....	Feb. 2,548	1,828,623	300,131	2,128,754	2,278,712	46,121	719,352	85,639	804,991	86.4	1,451,885	576,665	621,281
Denver & Salt Lake.....	Feb. 2,548	4,033,270	617,623	4,650,893	4,967,641	101,945	1,555,569	170,913	1,726,482	73.1	1,335,353	965,129	1,015,012
Detroit & Mackinac.....	Feb. 375	82,060	19,261	101,321	12,911	.....	.....	.....	.....	91.7	9,371	7,706	5,201
Detroit & Toledo Shore Line.....	Feb. 50	159,017	45,080	204,097	37,073	3,700	95,476	10,418	105,894	97.5	5,590	14,753	25,826
Detroit Terminal.....	Feb. 26	.....	.....	.....	.....	.....	.....	.....	.....	44.1	256,081	231,912	132,232
Duluth & Iron Range.....	Feb. 488	1,015,246	5,201	1,020,447	1,186,414	8,440	300,666	56,217	356,883	82.1	34,884	19,700	16,094
Duluth, Missabe & Northern.....	Feb. 306	92,402	6,654	99,056	110,777	1,256	109,950	22,819	132,769	86.0	51,904	19,836	16,802
Duluth, Winnipeg & Pacific.....	Feb. 178	174,032	14,382	188,414	192,835	3,875	66,804	18,217	85,021	62.6	398,381	290,922	183,701
Elgin, Joliet & Eastern.....	Feb. 459	1,740,316	26,940	1,767,256	1,914,638	12,960	686,294	42,886	729,180	64.4	36,404	290,922	183,701
Erie R. R.....	Feb. 2,053	5,713,357	920,248	6,633,605	7,266,924	149,923	3,347,965	285,837	3,633,802	94.3	415,540	48,356	52,173
Chicago & Erie.....	Feb. 2,053	1,184,681	187,416	1,372,097	1,896,013	301,885	6,778,765	576,696	7,355,461	95.5	651,156	80,405	8,996
New Jersey & New York.....	Feb. 45	27,648	93,851	121,500	18,272	1,290	68,633	3,706	72,339	88.3	14,755	11,113	18,456
N. Y., Susquehanna & Western.....	Feb. 135	195,429	52,889	248,318	294,556	4,020	204,121	11,624	215,745	110.6	31,096	60,333	50,014
Evansville, Indianapolis & Terre Haute.....	Feb. 146	180,140	7,366	187,506	193,427	1,922	71,071	7,708	78,779	67.7	62,555	56,968	28,232
Florida East Coast.....	Feb. 849	1,610,502	13,322,278	14,932,780	3,296,919	3,534	1,080,950	42,866	1,123,816	66.3	137,368	126,189	64,220
Fort Smith & Western.....	Feb. 249	114,717	13,111	127,828	131,484	5,381	48,666	7,574	56,240	82.5	115,058	10,923	3,339
Galveston Wharf Co.....	Feb. 13	.....	.....	.....	.....	.....	.....	.....	.....	87.5	16,426	38,467	11,409
Georgia R. R.....	Feb. 328	373,697	75,693	449,390	479,130	20,838	214,981	21,249	236,230	85.6	68,833	61,314	65,599
Georgia & Florida.....	Feb. 406	131,251	16,475	147,726	163,694	8,608	63,440	8,029	71,469	72.9	132,537	137,537	140,135
	406	235,181	46,870	282,051	312,824	16,603	125,001	15,934	140,935	73.6	85,333	71,301	31,773

## REVENUES AND EXPENSES OF RAILWAYS

MONTH OF FEBRUARY AND TWO MONTHS OF CALENDAR YEAR 1926—(CONTINUED)

Name of road	Average mileage operated during period	Operating revenues			Operating expenses			Operating ratio	Net from railway operation	Operating income (or loss)	Net after rents	Net after rents, 1925
		Freight	Passenger	Total (inc. misc.)	Maintenance of way and structures	Traffic	Transportation					
Grand Trunk Western.....	347	\$1,229,410	\$138,185	\$1,367,595	\$89,994	\$33,525	\$549,698	76.4	\$339,765	\$271,322	\$138,398	\$21,953
Atlantic & St. Lawrence.....	347	2,452,639	2,917,221	5,369,860	71,298	1,104,686	109,436	76.6	682,000	544,908	296,034	159,847
Atlantic & St. Lawrence.....	166	171,956	30,091	202,047	27,721	4,703	123,034	92.5	16,206	2,556	67,988	12,633
Atlantic & St. Lawrence.....	166	384,825	58,521	443,346	50,747	10,072	252,483	85.4	68,554	41,254	99,128	152,034
Chic., Det. & Canada Gr. Tr. Jct.....	59	259,137	3,694	262,831	25,322	3,927	103,237	51.1	152,253	142,415	106,053	139,067
Det., Grand Haven & Mil.....	189	531,665	7,240	538,905	63,818	8,056	206,688	50.1	316,901	297,259	226,053	244,223
Det., Grand Haven & Mil.....	189	465,283	30,278	495,561	39,539	10,858	241,883	62.3	205,223	198,978	106,740	144,833
Det., Grand Haven & Mil.....	189	924,701	62,654	987,355	82,022	22,648	488,112	63.6	395,691	382,975	197,220	30,537
Great Northern.....	8,221	5,007,659	931,896	5,939,555	612,157	193,489	2,694,365	77.5	1,487,809	768,590	752,524	748,388
Green Bay & Western.....	234	115,352	7,732	123,084	12,240	397,850	5,622,033	77.8	3,019,399	1,576,843	1,623,499	1,556,404
Green Bay & Western.....	234	238,916	15,941	254,857	18,023	4,852	2,689	70.9	77,351	28,711	27,353	11,465
Gulf & Ship Island.....	307	274,065	48,682	322,747	123,509	4,846	140,975	99.3	2,536	23,732	31,663	56,374
Gulf, Mobile & Northern.....	466	549,954	101,252	651,206	244,060	128,714	14,777	97.7	16,290	35,630	93,753	125,981
Gulf, Mobile & Northern.....	466	445,011	29,294	474,305	77,234	24,948	138,598	67.85	158,782	115,755	109,302	92,552
Hocking Valley.....	348	1,180,683	62,437	1,243,120	166,871	14,569	424,065	68.32	318,130	234,122	223,938	172,728
Illinois Central.....	4,874	9,516,359	2,083,373	11,599,732	1,475,696	283,646	4,336,486	78.2	286,000	174,249	273,616	174,803
Illinois Central.....	4,874	19,588,593	4,500,671	24,089,264	3,084,826	554,348	9,244,588	74.7	6,454,554	4,625,262	2,269,466	2,063,739
Illinois Central.....	4,874	1,571,122	270,447	1,841,569	292,516	34,120	706,192	75.0	516,557	363,677	303,378	414,609
Illinois Central.....	4,874	3,151,072	590,854	3,741,926	726,149	66,045	1,475,548	75.8	956,518	663,837	538,181	825,112
Illinois Central.....	4,874	11,087,481	2,333,820	13,421,301	1,768,212	317,814	5,042,678	74.5	3,659,381	2,600,731	2,572,844	2,478,348
Illinois Central.....	4,874	22,739,665	5,091,525	27,831,190	3,723,370	620,393	10,720,136	75.1	7,411,072	5,289,099	5,199,033	4,972,247
Kansas City, Mexico & Orient.....	272	99,115	5,375	104,490	26,997	6,718	52,525	114.6	16,705	20,730	608	11,699
Kans. City, Mex. & Orient of Tex. Febs.....	272	216,395	12,028	228,423	65,802	12,709	108,673	111.0	27,226	35,226	1,086	45,958
Kans. City, Mex. & Orient of Tex. Febs.....	272	229,656	10,923	240,579	44,818	7,481	78,275	78.7	53,163	46,156	10,323	114,519
Kans. City, Mex. & Orient of Tex. Febs.....	272	470,679	28,886	499,565	94,400	14,375	162,054	78.2	113,421	99,414	20,594	143,694
Kansas City Southern.....	784	1,161,108	107,281	1,268,389	142,371	50,489	457,817	67.5	452,711	345,042	305,238	173,277
Texasarkana & Ft. Smith.....	81	191,087	9,982	201,069	21,936	98,611	967,703	67.1	973,297	757,213	676,106	471,388
Kansas, Oklahoma & Gulf.....	81	399,483	21,163	420,646	40,256	11,398	131,464	55.0	203,636	169,213	105,265	108,584
Kansas, Oklahoma & Gulf.....	314	194,633	5,059	199,692	67,760	9,280	72,006	89.7	21,154	12,634	—292	—26,562
Lake Superior & Ishpeming.....	160	65,997	5,505	71,502	140,219	17,764	151,331	89.9	42,956	28,320	—1,127	—41,994
Lake Superior & Ishpeming.....	160	134,210	10,266	144,476	25,439	570	94,859	125.9	19,539	34,542	39,150	33,648
Lake Superior & Ishpeming.....	160	134,210	10,266	144,476	54,232	1,125	72,749	125.7	—39,032	—65,546	—74,223	—69,728
Lake Terminal.....	13	.....	.....	.....	9,394	.....	47,684	103.1	—2,354	—8,319	—6,117	1,978
Lehigh & Hudson River.....	96	168,429	2,761	171,190	19,552	.....	102,640	108.0	12,012	23,942	18,629	4,157
Lehigh & Hudson River.....	96	332,531	5,565	338,096	41,256	4,061	185,158	79.6	53,189	41,389	20,253	50,883
Lehigh & New England.....	219	205,746	1,635	207,381	26,157	3,670	101,220	102.2	—4,644	—12,089	5,789	75,609
Lehigh Valley.....	1,363	3,702,446	553,324	4,255,770	146,495	9,609	214,254	112.4	—50,906	—65,809	—46,406	115,535
Louisiana & Arkansas.....	302	316,166	17,504	333,670	58,654	1,181,348	134,442	94.7	23,594	70,654	—90,623	737,832
Louisiana Ry. & Nav. Co.....	302	242,736	16,062	258,798	60,129	11,487	123,776	92.9	19,275	3,175	—34,496	—25,538
Louisiana Ry. & Nav. Co.....	302	508,080	35,250	543,330	122,482	21,774	268,205	93.1	39,785	—4,787	—75,946	—74,870
Louisiana Ry. & Nav. Co. of Tex. Febs.....	206	109,846	5,084	114,930	17,064	4,157	59,786	86.9	15,948	11,934	—8,892	—16,682
Louisville & Nashville.....	5,038	206,056	13,155	219,211	38,262	7,662	117,199	89.2	24,978	17,095	—25,515	—1,062
Louisville & Nashville.....	5,038	9,515,590	1,776,287	11,291,877	1,646,420	250,486	4,286,096	77.0	2,741,070	2,144,761	2,024,794	1,914,892
Louisville & Nashville.....	5,038	19,090,626	3,900,250	22,990,876	3,216,366	528,195	8,923,767	77.1	5,562,761	4,371,224	3,967,069	3,815,817
Louisville, Henderson & St. Louis.....	199	269,540	49,080	318,620	57,052	7,342	106,525	67.5	108,350	84,180	75,855	82,095
Maine Central.....	1,121	364,108	103,831	467,939	107,337	13,351	218,755	64.5	238,372	198,939	179,899	166,093
Maine Central.....	1,121	1,110,775	287,381	1,398,156	288,858	45,349	676,944	86.5	204,807	96,453	116,748	230,743
Maine Central.....	1,121	2,330,169	580,376	2,910,545	479,439	24,594	1,391,918	83.2	537,724	316,949	315,611	374,083
Midland Valley.....	364	274,884	28,707	303,591	38,981	6,089	17,514	58.4	131,721	114,739	98,746	96,316
Minneapolis & St. Louis.....	1,627	970,906	105,166	1,076,072	98,387	12,995	175,102	84.2	277,340	243,483	216,676	218,870
Minneapolis & St. Louis.....	1,627	1,930,956	208,517	2,139,473	197,797	77,589	1,079,559	86.9	296,668	165,305	108,084	87,800



## REVENUES AND EXPENSES OF RAILWAYS

MONTH OF FEBRUARY AND TWO MONTHS OF CALENDAR YEAR 1926—CONTINUED

Name of road	Average mileage operated during period	Operating revenues			Operating expenses			Operating ratio	Net from railway operation	Operating income (or loss)	Net after rents, 1925
		Freight	Passenger	Total (inc. misc.)	Way and structures	Equip-ment	Traffic				
Min., St. Paul & S. S. Marie.....	Feb. 4,400	\$2,527,640	\$454,899	\$3,233,037	\$401,875	\$674,099	\$66,223	\$1,388,185	\$109,730	\$2,662,547	\$300,448
Duluth, South Shore & Atlantic.....	2 mos. 4,400	5,020,136	1,004,818	6,336,410	846,695	1,419,695	131,170	2,890,793	222,390	5,543,919	324,414
Spokane-International.....	Feb. 165	72,420	10,433	88,675	10,105	8,396	3,413	31,140	6,510	60,705	12,485
Mississippi Central.....	2 mos. 165	146,988	22,836	182,336	19,493	16,534	6,698	46,670	12,667	182,277	39,138
Missouri & North Arkansas.....	Feb. 161	113,787	9,175	127,730	13,810	12,760	7,426	34,510	7,160	182,277	39,138
Missouri-Kansas-Texas.....	2 mos. 161	232,640	21,137	263,364	31,321	51,240	14,789	70,141	14,681	182,172	48,850
Mo., Kansas, Texas of Texas.....	Feb. 364	109,641	14,313	124,438	50,428	13,241	7,875	53,986	6,900	138,490	6,073
Missouri Pacific.....	2 mos. 364	203,445	31,940	234,811	87,598	106,027	14,381	106,027	14,381	263,114	30,699
International Great Northern.....	Feb. 1,799	2,009,068	349,235	2,536,863	213,208	601,038	53,122	706,096	84,235	1,668,351	716,896
Texas & Pacific.....	2 mos. 1,799	4,119,075	777,182	5,302,893	466,231	1,281,766	148,134	1,481,345	173,134	3,542,429	1,586,601
Mobile & Ohio.....	Feb. 1,389	1,105,579	290,877	1,518,013	171,598	189,836	41,485	661,395	60,411	1,135,142	250,602
Monongahela.....	2 mos. 1,389	2,341,684	635,246	3,289,949	403,433	423,716	88,019	1,410,803	122,373	2,462,642	327,114
Monongahela Connecting.....	Feb. 7	8,173,338	1,236,461	10,205,985	1,434,676	2,271,838	253,864	3,638,927	313,481	7,925,631	1,086,133
Montour.....	2 mos. 7	16,617,171	2,680,237	20,890,023	2,807,936	4,469,114	507,670	7,764,896	627,709	16,126,065	2,370,527
Nashville, Chattanooga & St. Louis.....	Feb. 57	50,832	279	51,354	12,745	36,548	1,440	15,013	7,016	72,762	18,966
Nevada Northern.....	2 mos. 57	99,909	578	101,313	26,632	67,231	2,770	30,223	13,931	140,777	28,966
Newburgh & South Shore.....	Feb. 1,259	1,412,348	375,915	1,906,156	283,997	674,444	84,870	682,274	67,444	1,490,387	359,347
New Orleans Great Northern.....	2 mos. 1,259	2,782,205	818,118	3,873,274	546,143	777,335	167,440	1,440,486	141,755	3,083,020	582,616
New York Central.....	Feb. 165	62,936	8,251	77,662	13,118	5,895	854	14,661	4,614	39,493	28,180
Cincinnati Northern.....	2 mos. 165	126,940	16,375	156,583	18,172	12,724	1,739	30,892	9,963	50,766	52,598
Cleveland, Cin., Chic. & St. Louis.....	Feb. 244	387,632	6,261	398,401	37,160	65,627	6,308	126,757	9,304	245,128	92,380
Indiana Harbor Belt.....	2 mos. 244	750,104	13,725	774,117	76,013	124,841	11,095	268,574	22,912	500,742	137,383
Michigan Central.....	2 mos. 244	4,989,012	1,439,322	6,920,992	677,699	1,519,027	237,810	2,670,961	261,786	1,156,530	1,262,150
Pittsburgh & Lake Erie.....	Feb. 1,691	8,084,380	244,396	8,597,436	995,162	1,694,184	242,668	3,151,276	551,155	11,277,154	2,791,278
New York, Chicago & St. Louis.....	2 mos. 1,691	4,866,120	3,894,724	9,500,421	1,278,690	2,065,423	73,362	3,777,381	287,019	7,649,304	856,545
N. Y., New Haven & Hartford.....	Feb. 1,918	9,268,799	7,963,804	17,519,913	2,405,335	4,360,949	145,907	7,670,619	586,253	15,012,254	3,024,203
Central New England.....	2 mos. 1,918	410,759	4,795	434,300	80,805	182,091	15,999	178,999	15,999	363,837	231,851
New York Connecting.....	Feb. 20	171,791	.....	171,791	16,466	11,744	.....	50,856	1,891	80,957	109,960
New York, Ontario & Western.....	2 mos. 20	375,059	.....	375,059	31,600	30,266	.....	102,607	3,336	157,809	225,267
	569	303,684	88,500	392,184	80,025	158,296	16,050	350,041	32,133	185,937	177,863
	569	550,726	174,969	725,695	169,829	302,610	31,585	692,440	65,666	1,262,839	406,796





## REVENUES AND EXPENSES OF RAILWAYS

MONTH OF FEBRUARY AND TWO MONTHS OF CALENDAR YEAR 1926—CONTINUED

Name of road	Average mileage operated during period	Operating revenues			Operating expenses			Operating ratio	Net from railway operation	Net after rents	Net after 1925
		Freight	Passenger	Total	Maintenance of way and structures	Traffic	Trans-portion				
Georgia Southern & Florida	401	\$411,467	\$160,369	\$571,836	\$83,141	\$77,694	\$16,837	\$252,154	\$12,184	\$446,185	\$80,837
401	844,680	385,869	163,881	549,750	166,455	163,881	32,574	333,323	21,846	321,477	185,046
New Orleans & Northeastern	207	404,975	153,783	558,758	154,791	154,791	25,302	146,308	14,323	318,095	121,701
207	806,124	385,869	163,881	549,750	166,455	163,881	32,574	333,323	21,846	321,477	185,046
Northern Alabama	110	111,392	121,983	233,375	18,039	2,077	3,338	2,789	55.3	49,394	27,255
110	222,218	18,039	2,077	20,116	1,063	4,761	81,065	152,512	62.1	82,569	39,548
Southern Pacific	8,769	9,228,651	3,112,218	12,340,869	2,347,153	339,506	5,036,386	559,771	3,124,239	1,786,976	1,170,241
2 mos.	20,631,214	6,595,369	2,649,854	9,245,223	5,851,910	64,859	10,601,350	1,177,493	6,613,767	4,053,639	2,805,677
Atlantic Steamship Lines	Feb.	768,935	33,497	802,432	14,681	147,425	33,717	32,264	86.4	129,175	129,043
2 mos.	1,537,441	66,994	67,922	134,916	29,796	28,817	1,268,330	1,701,262	89.7	182,645	181,782
Galveston, Harrisburg & S. Antonio	2,104	1,516,986	430,208	1,947,194	461,683	1,601,601	1,066,330	1,824,314	86.7	280,208	148,349
2 mos.	3,251,841	917,290	4,507,466	868,842	950,329	113,375	1,654,504	3,801,230	84.5	706,240	277,479
Houston & Texas Central	891	789,952	184,262	974,214	209,435	246,595	338,159	46,851	864,553	140,249	175,916
2 mos.	1,579,904	368,524	473,526	842,050	514,619	56,589	750,568	94,316	1,796,923	277,185	272,155
Houston, East & West Texas	191	1,004,407	32,215	1,036,622	55,456	106,172	57,812	10,225	44,630	121,322	1,876
2 mos.	389,318	68,654	483,423	97,557	104,172	8,093	133,065	20,265	122,391	91,961	60,742
Louisiana Western	207	218,228	78,020	296,248	50,798	52,310	93,968	19,823	237,895	57,341	44,483
2 mos.	441,446	164,447	653,900	94,946	109,244	32,648	200,441	39,563	167,252	113,451	89,102
Morgan's L. & T. R. R. & S. C. Co.	400	437,882	133,903	571,785	192,594	272,440	272,440	681,231	104.4	36,170	63,091
2 mos.	991,688	273,117	1,395,666	310,835	317,506	48,228	599,510	73,919	1,361,473	34,193	109,086
Texas & New Orleans	544	617,062	136,895	753,957	147,074	183,362	374,515	69,291	43,021	7,816	100,428
2 mos.	1,234,124	273,117	1,395,666	310,835	317,506	48,228	599,510	73,919	1,361,473	34,193	109,086
Spokane, Portland & Seattle	554	419,200	88,575	507,775	563,448	85,085	175,924	20,768	390,121	160,091	8,065
2 mos.	842,444	188,819	1,451,129	154,350	193,715	18,610	373,046	41,336	355,064	200,978	123,946
Tennessee Central	296	221,372	28,889	250,261	51,983	41,786	96,496	209,359	79.5	53,992	16,613
2 mos.	445,840	63,339	103,825	124,164	86,717	14,854	198,290	24,400	92,033	79,325	31,385
*Terminal R. R. Assoc. of St. Louis	55	55	55	110	125,149	2,519	406,068	20,524	394,091	286,250	364,884
2 mos.	1,100,182	2,169,182	274,083	183,650	5,212	887,590	41,652	1,399,114	770,068	558,004	719,377
Toledo, Peoria & Western	248	84,173	21,559	105,732	114,786	27,914	60,204	6,546	116,066	47,122	21,205
2 mos.	173,250	44,883	218,133	38,125	60,685	3,750	129,857	13,198	245,472	103.9	23,246
Trinity & Brazos Valley	367	133,891	17,719	151,610	49,962	32,210	76,801	11,894	174,644	27,013	4,506
2 mos.	302,866	17,713	334,314	120,514	63,424	8,637	178,978	27,001	307,610	78,697	156,828
Ulster & Delaware	128	20,603	8,641	29,244	13,220	17,328	40,130	5,701	77,660	26,016	27,162
2 mos.	38,408	15,089	53,497	26,626	31,643	2,618	77,098	11,753	149,738	38,370	51,462
Union R. R. of Penna.	45	45	45	90	784,509	412,451	9,209	775,952	98.9	8,557	45,531
2 mos.	1,616,803	165,931	450,375	361	856,818	18,797	1,492,282	92.3	124,521	91,944	181,136
Union Pacific	3,691	5,431,987	1,055,290	6,487,277	1,747,835	143,515	2,119,513	284,174	5,061,274	1,359,722	1,238,683
2 mos.	11,210,381	2,305,931	14,817,425	3,273,341	3,569,282	283,221	4,523,502	577,052	10,516,262	2,880,543	2,693,489
Oregon Short Line	2,490	2,046,970	330,114	2,377,084	516,073	45,249	807,867	113,908	1,950,097	331,378	291,915
2 mos.	4,309,684	665,673	5,323,527	780,483	1,078,050	90,209	1,716,823	228,239	3,998,273	810,309	720,444
Oregon, Wash. R. R. & Nav. Co.	2,237	1,562,331	278,278	1,840,609	376,474	63,964	755,140	116,353	1,687,365	148,614	77,163
2 mos.	3,068,179	599,451	3,998,214	665,598	739,966	126,101	1,590,274	227,736	3,401,179	254,306	104,423
Los Angeles & Salt Lake	1,207	1,325,297	326,768	1,810,482	371,751	396,809	607,041	67,995	1,572,936	104,432	28,812
2 mos.	2,697,559	637,847	3,673,974	780,550	829,491	120,476	1,288,587	134,925	3,291,830	116,209	42,805
St. Joseph & Grand Island	258	255,912	17,438	273,350	41,432	3,051	95,952	14,068	196,784	67,740	53,206
2 mos.	543,325	36,916	608,227	76,930	87,984	5,983	202,569	29,645	403,111	158,086	128,761
Utah	102	122,241	163	122,404	5,418	37,163	30,407	6,269	47,330	33,845	28,961
2 mos.	288,594	373	288,967	32,554	76,263	732	67,339	13,137	190,026	80,955	71,649
Virginian	545	1,551,198	57,766	1,608,964	191,269	380,768	31,057	955,027	765,331	629,331	719,953
2 mos.	3,160,603	119,275	3,482,134	374,850	701,208	25,445	791,316	64,601	1,955,936	1,257,084	1,096,780
Wabash	2,524	4,276,269	630,399	5,281,326	590,621	148,384	2,094,568	174,864	4,001,950	1,006,379	601,957
2 mos.	8,562,710	1,387,217	10,695,030	1,159,884	1,957,603	300,227	4,342,506	340,227	8,163,883	1,995,637	1,193,203
Western Maryland	804	1,765,478	45,091	1,810,569	227,164	389,596	604,119	44,249	1,313,732	468,484	415,481
2 mos.	3,521,015	95,583	3,717,218	424,361	828,915	74,764	1,184,727	88,800	2,622,962	939,256	863,706
Western Pacific	1,042	1,799,849	92,297	1,992,146	127,778	36,675	33,088	174,864	1,817,114	96,314	207,922
2 mos.	3,599,698	195,408	2,017,977	262,918	409,457	72,518	765,468	67,514	1,605,244	479,425	321,641
Wheeling & Lake Erie	511	1,301,991	35,892	1,414,397	147,413	371,975	464,061	37,744	1,053,069	238,879	270,622
2 mos.	2,683,480	75,497	2,917,584	311,761	742,658	63,355	967,458	93,586	2,182,246	486,076	528,349

\*Includes East St. Louis Connecting, St. L. Merchants' Bridge Terminal, St. Louis Transfer.

## Western Society of Engineers to

### Discuss Highway Motor Traffic

The fifth annual convocation of the Western Society of Engineers, to be held at Chicago on April 21 and 22, will have as its general subject, "Highways and Motor Transportation." The papers presented will give an engineering analysis of the highway problem in all its phases relating to present transportation, growth and development, economics, regulation, taxation and co-ordination. Among the subjects of particular interest to railway men are Economics of Highway Transportation, Regulation of Motor Bus and Truck Lines, Use of Motor Buses and Trucks in Conjunction with Rail Haul, Operating Cost, Economic Length of Haul and Proper Spheres of Operation of the Motor Buses and Motor Trucks.

### Cross Crossings Cautiously

The Safety Section of the American Railway Association, Robert Scott, chairman, is preparing for another summer campaign to reduce the number of persons killed and injured at highway crossings, and has prepared, for the use of the railroads, a new colored poster in which everybody is enjoined once more to Cross Crossings Cautiously. Orders for posters, cards and stickers should be sent, before April 15, to J. C. Caviston, secretary, 30 Vesey street, New York City.

H. A. Rowe, chairman of the committee, in his appeal for co-operation by all railroads, summarizes his argument for increased activity as follows:

1. For reasons of humanity.
2. We are contending with 20,000,000 automobiles.
3. To avoid derailment of trains and injury to passengers and employees.
4. Permanence of the problem. We shall never see all crossings eliminated.
5. Verdicts of \$40,000 to \$60,000 per case are not unheard of.
6. Cost of whole-hearted cooperation in our campaign is nominal.

Posters, in large quantities, will cost \$64 and upward per thousand; miniature reproductions (stickers) 65 cents a thousand.

## Division VI, A. R. A., Purchases

### and Stores Annual Meeting

The seventh annual meeting of Division VI—Purchases and Stores, of the American Railway Association, C. D. Young, chairman, W. J. Farrell (30 Church street, New York), secretary, will be held at Atlantic City, N. J., June 9, 10 and 11, 1926, with headquarters at the Chalfonte-Haddon Hall hotel. The sessions will be held in the Vernon room, Haddon Hall.

The subjects to be discussed are: Stores Department Book of Rules; Classification of Material; Recovery, Repairs and Reclamation of Discarded Material—Classification, Handling and Sale of Scrap; Provisions for Uniform Observance of General Balance Sheet Account 716—Materials and Supplies, and Recommendations Governing Charges to Material Stores Expenses, Paragraph 16—Special Instructions Operating Expenses; Forest Products; Stores Department Buildings and Facilities for Handling Materials; Workable Rules in Connection with the Carrying Out of the Provisions of Section 10 of the Clayton Anti-Trust Act; Supply Train Operation and Line Delivery of Materials; Joint Committee on Fuel Conservation; Materials Purchase Budget; Unit Piling and Numbering of Material; Purchasing Agent's Office Records and Office Organization; Stationery and Printing; General Accounting; Store Delivery of Material to Users at Shops; Standardization and Simplification of Store Stock and Disposition of Material Reaching Obsolescence; Control of Line Stocks; Uniform Methods Pertaining to Purchases of Equipment and Large Material Contracts and Vital Statistics Relating Thereto, and Sectional Committee on Special Track Work.

### New Bridge Policy Requires I. C. C. Approval

A new policy for handling bridge bills was announced in the United States Senate on April 2 by Senator Bingham, of the committee on commerce. He said it is the opinion of the committee that before reporting a bill granting the consent of Congress for the construction of a railroad bridge over a navigable stream the committee should require the proponents of the measure to show that the Interstate Commerce Commission has considered the new railroad proposed and approved of it.

Heretofore bridge bills have been passed by Congress in many cases without much consideration of the statement of the members of Congress from the locality interested. The new policy has resulted from opposition of local organizations in Washington and vicinity to the proposal of the Washington & Loughborough Belt Line & Terminal Company to build a belt line around the District of Columbia in Virginia and Maryland from Potomac yard, Alexandria, Va., to a connection with the Baltimore & Ohio at Mount Rainier, Md., 29 miles. The company had not yet applied to the Interstate Commerce Commission for a certificate. A bill providing for the bridge across the Potomac river had been passed by the House but was recalled; and when consideration of the bill came before the Senate committee on commerce it held a hearing at which vigorous opposition was made, not only by the local organizations, claiming that residential property would be affected, but also by representatives of the Baltimore & Ohio and the Pennsylvania.

### Railway Returns for February

Class I railroads for the first two months this year earned on their property investment at the annual rate of return of 4.60 per cent, according to reports compiled by the Bureau of Railway Economics. This is based on reports from 188 Class I roads, representing a total of 237,026 miles of road. The rate of return for the first two months in 1925 was 4.76 per cent. The net railway operating income for January and February of this year totaled \$129,013,855, compared with \$131,211,226 for the same period last year. Operating revenues, \$941,199,695, compared with \$940,225,049 last year; operating expenses, \$739,239,111, compared with \$739,668,694 last year. Maintenance expenditures, \$323,949,540, an increase of nearly \$2,000,000; maintenance of equipment, \$206,294,289, a decrease of \$3,677,236; maintenance of way, \$117,655,251, an increase of \$5,675,859.

February alone shows net operating income as \$63,289,297, compared with \$65,151,053 in February last year; operating revenues, \$460,204,236, compared with \$455,193,305, and operating expenses \$360,590,396, compared with \$355,693,648. Thirty-four Class I railroads operated at a loss in February, of which sixteen were in the Eastern district, one in the Southern and seventeen in the Western.

Taking the Eastern district alone, net railway operating income for two months was \$58,762,475, or at the annual rate of return of 4.95 per cent on their property investment; last year, \$63,544,276, and annual return 5.43 per cent. Total operating revenues, two months, \$462,971,491, a decrease of one per cent; operating expenses, \$373,092,850, a decrease of 0.3 per cent. For February, Eastern district, the net amounted to \$28,568,309, as compared with \$32,457,823 in February, 1925.

Southern district: two months, net, operating income, \$26,457,410; annual rate, 5.97 per cent; last year, \$24,973,275, annual rate 5.67 per cent. Operating revenues, two months, \$146,403,745, increase 8.6 per cent; operating expenses, \$107,439,418, increase 7.1 per cent. Net railway operating income, February, \$13,588,365, compared with \$13,521,655 in February last year.

Western district: two months net operating income, \$43,793,966, annual rate 3.72 per cent; last year, \$42,693,675. Operating revenues, two months, \$331,824,459, a decrease of 1.8 per cent under 1925; operating expenses, \$258,706,843, decrease 2.4 per cent. For February, net railway operating income, \$21,132,623, compared with \$19,171,575 in February, 1925.

### New York Central to Celebrate 100th Anniversary

Officers of the New York Central are planning elaborate celebrations to be held in Albany, Schenectady and New York City on Saturday, April 17, of the "one hundredth anniversary of the birth of the American railroad"; in other words, the centenary of the charter of the Mohawk & Hudson, between Albany and Schenectady, which is now a part of the New York Central main line; this charter having been granted by the legislature of New York on April 17, 1826. The Mohawk & Hudson was opened for operation on August 9, 1831, by the movement of a train drawn by the DeWitt Clinton, the four-wheel locomotive, built by the West Point Foundry Company, which, by numerous publications, has become familiar to American readers everywhere. The Quincy Granite railroad, in Massachusetts, had been in operation before that date, but that was a line of wooden rails, using horses as



motive power, and employed only to transport granite from the Quincy quarries to tidewater. It is claimed for the Mohawk & Hudson that it was the first steam railroad which remained a steam railroad continuously; other early railroads having made use more or less of horses or mules.

A special train, carrying guests, will leave New York City on the morning of April 17, at seven o'clock, for Albany. At Albany a bronze tablet commemorating the event will be unveiled in the passenger station, with addresses by the mayor of Albany and the president of the railroad.

Following these exercises a "pageant of locomotives" will proceed from Albany to Schenectady, 17 miles, followed by the guest train, where a similar tablet will be unveiled at the station, and with appropriate exercises. The pageant will include the (restored) DeWitt Clinton and the stage-coach cars; New York Central locomotive No. 999, famous for its performances on the Empire State Express, 30 years ago, and other locomotives illustrating the progress which has been made in locomotive power to the present day.

From Schenectady, the special train will be run over the Castleton Bridge and thence back to New York City where a banquet is to be held at the Waldorf-Astoria Hotel in the evening. A thousand guests are expected, the speeches at this banquet will be broadcast from WJZ beginning at 9:30 p. m.

### A. S. T. M. Committees Consider Railroad Subjects

A series of meetings was held on March 17, 18, and 19, 1926, at Providence, R. I., by a number of the committees of the American Society for Testing Materials during which a number of subjects were discussed and action taken directly concerning various departments of railroad work.

Committee A-1 on Steel, F. M. Waring, engineer of tests, Pennsylvania, Altoona, Pa., chairman, voted to refer to letter ballot of its members for adoption as tentative, new specifications for carbon steel rails which agreed with the 1925 specifications for rails of the American Railway Engineering Association with the single exception that the drop test is to be made with the head of the rail up instead of the base. Also, as a result of co-operation with the American Railway Engineering Association, new specifications are being proposed for steel tie plates and soft steel track spikes. The Sub-Committee on Steel Forgings has prepared specifications for high tensile alloy steel forgings, normalized.

Committee A-2 on Wrought Iron, the chairman of which is H. J. Force, chemist and engineer of tests, Delaware, Lackawanna & Western, Scranton, Pa., discussed new specifications for wrought iron pipe to be used for high temperatures and pressures. Arrangements have been made by this committee for conducting a series of physical tests on staybolt iron containing various percentages of phosphorus. Experiments are also being continued on both annealing and unannealing bars, including threaded specimens. All results to date indicate that wrought iron is materially improved by annealing, either in the plain bar or on the threaded bars.

Committee B-1 on Copper Wire reviewed several specifications for copper wire which covered medium hard-drawn wire and hard-drawn wire. A revision of all copper wire specifications is contemplated which will give the unit weight in terms of density rather than specific gravity. It is intended to submit these proposed specifications to the American Engineering Standards Committee, which, if adopted, will make one universal standard for the materials in question throughout the country. It was decided to specify resistivity in the specifications for bronze trolley wire in terms of lb. per mile-ohm in place of the present ohms per meter-gram. This change was made at the suggestion of the American Electric Railway Association.

Committee D-1 on Preservative Coatings for Structural Materials, is considering, among a number of subjects, the accelerated weathering of paints and means of designating the color of paint materials. A method of determining elasticity or toughness of less elastic varnishes is not available. The new lacquers are also receiving the attention of this committee.

Committee D-9 on Electrical Insulating Materials has been conducting comparative tests of insulating varnishes, particularly in reference to dielectric strength tests.

Data and information relative to the work being conducted by the American Society for Testing Materials can be obtained from C. L. Warwick, secretary-treasurer, 1315 Spruce street, Philadelphia, Pa.

## Traffic News

The Southern Pacific has opened a ticket office at Vancouver, B. C.

The Wabash has opened a branch office at 1008 Produce Exchange building, Chicago, for the convenience of the produce dealers of that district.

"Palatial" is the term used by the Great Northern to describe the quality of some new day coaches which have just been turned out of its shops; each coach being provided with a ladies' dressing room at one end and a men's smoking room at the other.

The Seaboard Air Line announces that, in co-operation with Arthur Brisbane, owner of 10,000 acres of land near Indiantown, Fla., 32 miles from West Palm Beach, it will establish demonstration farms to promote the sale of Florida farming lands to settlers.

The Chicago, Burlington & Quincy has changed its fast freight schedule between Chicago and Denver, so as to give third morning delivery in Denver instead of fourth. Under the new schedule close connections will be made with the Denver & Rio Grande Western for Salt Lake City, Utah.

The increases in commutation fares proposed by the St. Louis-San Francisco out of St. Louis, Mo., to and from points in St. Louis county, have been suspended by the Missouri Public Service Commission for 120 days from April 1. The increases proposed range from 15 to 30 per cent.

The Women's Traffic Club of Los Angeles, Ella A. Hausen, president, held its regular meeting on March 31. The principal discussion was on trap car service, which is a new thing in southern California. The meeting was addressed by George Buckley, traveling freight agent of the Baltimore & Ohio. The next meeting of the club will be held on April 14, the anniversary of the inception of the association.

The Southwestern Shipper is the title of a new magazine being published by the Shippers' Publishing Company of Houston, Tex. The magazine deals with freight rates and other subjects of interest to shippers. The detailed proceedings of recent Interstate Commerce Commission hearings are given, with sidelights on the circumstances leading up to the cases. Records of car loading are recorded and transportation needs of the section are outlined. A complete shipping schedule, giving the lines regularly operating out of Houston, Galveston, Port Arthur and Beaumont, is included.

### Railway Mail Pay Case

Counsel for the railroads have filed a motion like that of the Postmaster General (filed on March 26), objecting to the intervention of the publishers as parties to the case.

### Western Rate Case to Be Argued May 19

The Interstate Commerce Commission has announced that oral arguments will be heard before it at Washington beginning on May 19 in the western rate case, including Ex Parte 87, the rate structure investigation No. 17,000, and several allied cases, including the livestock rate case.

### Chicago Association of Commerce Files

#### Brief With Interstate Commerce Commission

The Transportation Committee of the Chicago Association of Commerce has filed a brief with the Interstate Commerce Commission on the petition of western carriers for a general increase in their freight rates, officially known as Ex Parte 87. The association is not opposed to the railroads receiving such increase in their revenue as may be necessary to provide ample transportation service and a reasonable return upon the value of the property devoted to transportation service, provided that such increases are made in the manner that will avoid infractions of other sections of the law. The argument referring to the decision of the Supreme

Court of the United States in the Wisconsin rate case insists that if increased revenue is necessary it should be derived from a readjustment of the existing rates, to the end that existing discrimination may be removed. The brief undertakes to show that the existing relationship between the interstate rates on the one hand, and the intrastate rates in Iowa, Wisconsin and Minnesota on the other hand, gives to the intrastate traffic an undue and unreasonable preference. It also refutes the carriers' contention that intrastate traffic is unimportant, and undertakes to show that the freight revenue accruing on state traffic ranges from 16 to 21 per cent of the total freight revenue of the roads operating in Iowa, Wisconsin and Minnesota. The committee also contends that from Chicago to these states the rate levels exceed the rate levels within the state by amounts ranging from 6 per cent to 53 per cent and that similar conditions exist with respect to rates from Chicago to points in Kansas, Nebraska and the Dakotas, where the level of the rates from Chicago exceed the intrastate rate levels by amounts ranging from 5 per cent to 34 per cent.

#### Midwest Shippers' Advisory Board to Meet

The Midwest Shippers' Advisory Board will hold its ninth regular meeting at the Edgewater Beach Hotel, Chicago, on April 13. Various committees and railroads will report and, in addition, store door delivery at Chicago will be discussed. Officers and the executive committee will be elected. John T. Pirie, of Carson, Pirie, Scott & Co., and chairman of the traffic committee of the Chicago Association of Commerce, will address the meeting.

#### Central Western Shippers' Advisory Board Meets

The fourth annual meeting of the Central Western Shippers' Advisory Board will be held at the Antlers Hotel, Colorado Springs, Colo., on April 15. The executive committee will meet on April 14. The docket includes the election of officers and the reports of various committees. Marketing and distribution problems will be discussed, emphasis being placed upon the marketing of sheep, lambs and cattle. J. E. Gorman, president of the Chicago, Rock Island & Pacific, will address the meeting.

### Motor Transport News

#### Further Extension of B. & M. Bus Lines Proposed

A proposed extension of motor coach routes in co-ordination with railroad service, to points between Waltham, Mass., and Concord, including some communities which now have no organized transportation, has been announced by the Boston & Maine Transportation Company. The announcement is made in connection with the filing of applications with municipal authorities of Waltham, Weston, Lincoln and Concord for licenses to establish service between those places.

The Boston & Maine Transportation Company also proposes, with the permission of the communities involved, to extend the Westford-Graniteville-Littleton service, now under application, through to the Concord railroad station, and petitions to effect this improvement are being filed with Littleton, Acton and Concord.

#### Additional New York-New Jersey Ferry Service

A new company, known as Electric Ferries Inc., has been organized to operate Diesel-electric ferry boats between West Twenty-third street, New York, and Weehawken and Undercliff, N. J. The existing Erie ferry terminal at West Twenty-third street will be used and new ferry facilities will be constructed on Erie property at Weehawken and Undercliff, the new company having entered into a contract with the Erie to this effect.

The new service is designed for motor vehicles only and each boat will accommodate 5 lanes of traffic, the center lane being reserved for interstate parlor car motor buses and heavy freight trucks. Each boat will accommodate about 40 automobiles and 5 parlor buses or their equivalent.

The Erie now offers store-door delivery in lower New York by truck from its Jersey City terminal. The ferry company's announcement indicates that the establishment of the new ferry service may permit the extension of this service to other points of New York City by truck from Erie terminals at Weehawken and Undercliff. The initial equipment of the new company will consist of 6 boats.

## Commission and Court News

### Interstate Commerce Commission

The commission has suspended from April 5 until August 3 the operation of tariff schedules which propose to increase the rates on milk and cream moving in passenger train service between points in Iowa, Michigan, Minnesota, Montana, North Dakota, South Dakota and Wisconsin.

Applications of railroads running west from Chicago for authority to establish, continue and maintain class and commodity rates from points in New England and eastern trunk-line territories and Canada to St. Paul and Minneapolis, Minn., lower than the rates to intermediate points, were denied by the Interstate Commerce Commission, Division 4, in a decision issued on April 6.

The commission has issued a decision approving proposed proportional rates on live stock lower than corresponding local rates, from Chicago to destinations in official territory, applicable on traffic from specified stations on the North Western and the Milwaukee in South Dakota and stations intermediate thereto in adjoining states, with proposed concurrent cancellation of application of Kelly combination rule.

The commission has suspended from April 5 until August 3 the operation of schedules published in supplements Nos. 68 and 70 to Agent F. A. Leland's tariff I. C. C. No. 1640, which proposes to reduce the rates and increase the carload minimum weights on hides, pelts and skins from points in Louisiana to Eastern Seaboard territory. This has the effect of increasing the charge per car, for example, from Shreveport, La., to New York City, from \$226 to \$342.

The Interstate Commerce Commission has suspended from April 2 until July 31, the operation of schedules published in various westbound trans-continental freight tariffs which propose to increase the rates on locomotives and tenders, narrow-gage, moving on standard-gage trucks, from Lima, Ohio, and other shipping points to destinations in the Pacific Coast group and Montana. For example the rate from Lima, Ohio, to Oroville, Calif., was to be increased from 108.5 to 124 cents per 100 lb.

Objection to continuing permanently the present temporary rates on bituminous coal to points in New Jersey which were required by the decision of the Interstate Commerce Commission of November 26, 1925, is made by the Erie in an answer filed with the commission to the petitions of coal operators' associations which had asked that the rates be continued. D. L. Gray, vice-president of the Erie, says that the emergency which caused the rates to be applied has now passed because of the settlement of the anthracite strike and that "there is at the present time and normally an ample supply of both bituminous and anthracite coal available at all points in Northern New Jersey under rates and routes existing prior to the establishment of the emergency rates and routes."

### Court News

#### Penalties Against Railroad for Slow

#### Investigation Held Unconstitutional

Commenting upon Florida Rev. Stat. 1920, sections 4581-4583, imposing a penalty of 50 per cent per annum interest, and attorneys fees as a penalty for nonpayment of a shipper's claim within 60 days from filing with the carrier's agent, the Florida Supreme Court says that where, in view of the amount of the claim and the uncertainty of the railroad's liability, it was the railroad's right to fully investigate and test the legality and justness of the claim, to impose heavy penalties for doing so, even under statutory authority, would deny to the railroad the rudiments of fair play and violate the Fourteenth Amendment and the Florida Declaration of Rights. Besides this, unreasonable penalties and damages tend to increase service rates or to reduce service efficiency, which is detrimental to the railroad's patrons.—Atlantic Coast Line v. Wilson & Toomer Fertilizer Co. (Fla.) 104 So. 593.



## Equipment and Supplies

### Locomotives

F. C. DEL GUZO Y. SANTA ANA has ordered two Mikado type locomotives from the Baldwin Locomotive Works.

THE SOROCABANA RAILWAY (BRAZIL) has ordered 10 Mountain type, three-cylinder locomotives from the Baldwin Locomotive Works.

THE GREEN BAY & WESTERN is inquiring for two Mogul type locomotives, two consolidation type locomotives and two consolidation type locomotives to have three cylinders.

THE GREAT NORTHERN has ordered a 100-ton oil-electric locomotive from the Ingersoll-Rand Company, the General Electric Company and the American Locomotive Company, which companies co-operated in its manufacture. This locomotive is for yard switching service in St. Paul. Inquiry for this equipment was reported in the *Railway Age* of April 3.

THE ROYAL STATE RAILWAYS OF SIAM are asking for sealed tenders for the supply of steam or internal combustion shunting locomotives to be received by Purachatra, commissioner-general, at Bangkok (Siam) up to 2 p. m., June 28. Tender forms, specifications and plans may be obtained from C. P. Sandberg, 100 Broadway, New York, upon payment of six dollars a set.

### Freight Cars

THE MISSOURI PACIFIC is inquiring for four air-dump cars.

THE SOUTHERN is inquiring for 500 underframes for flat cars.

THE UTAH COPPER COMPANY is inquiring for 35 Ingoldsby dump cars.

THE GENERAL ELECTRIC COMPANY is inquiring for six flat cars of 40 tons' capacity.

THE SOUTH PORTO RICO SUGAR COMPANY is inquiring for 100 cane cars of 30 tons' capacity.

THE TEXAS & PACIFIC is inquiring for 300 single-sheathed or 300 double-sheathed automobile box cars.

THE CHILE EXPLORATION COMPANY is inquiring for four flat cars for export. Three of these cars are to be of 60 tons' capacity and one of 45 tons' capacity.

THE SEABOARD AIR LINE has ordered 50 caboose cars from the American Car & Foundry Company. Inquiry for this equipment was reported in the *Railway Age* of February 27.

THE BIRMINGHAM & SOUTHERN has ordered 100 gondola cars from the Tennessee Coal, Iron & Railroad Co. Inquiry for this equipment was reported in the *Railway Age* of March 6.

THE PERE MARQUETTE has ordered 350 automobile box cars from the National Steel Car Corporation. Inquiry for this equipment was reported in the *Railway Age* of February 20. An order for 10 air dump cars of 30 cu. yd. capacity has been let to the Magor Car Corporation.

THE BALTIMORE & OHIO has ordered underframes and superstructure parts for 100 caboose cars from the Pressed Steel Car Company. The company has also given a contract for 16, 20 cu. yd. capacity, drop-bottom, air-dump cars to the Koppel plant of the Pressed Steel Car Company. Inquiry for the dump cars was reported in the *Railway Age* of March 27.

### Passenger Cars

THE READING COMPANY is inquiring for 25 coaches and five combination passenger and baggage cars.

THE MISSOURI PACIFIC has ordered five combination passenger and baggage gas-electric motor cars from the Electro-Motive Company.

THE SEABOARD AIR LINE has ordered 6 combination passenger and baggage cars from the American Car & Foundry Company. Inquiry for this equipment was reported in the *Railway Age* of February 27.

THE NEW YORK CENTRAL has ordered 10 multiple unit cars for suburban service from the Standard Steel Car Company. This company was reported in the *Railway Age* of March 6 as inquiring for a number of multiple unit cars.

### Machinery and Tools

THE CHICAGO & NORTH WESTERN and subsidiaries have issued inquiries for 30 machine tools.

THE SOUTHERN has ordered two pile drivers and two locomotive cranes from the Industrial Works.

THE ILLINOIS CENTRAL is inquiring for eleven 20-ton electric cranes for its Paducah, Ky., shops.

THE MICHIGAN CENTRAL has ordered a 90-in. journal turning lathe from Manning, Maxwell & Moore, Inc.

THE CINCINNATI NORTHERN has ordered a 48-in. car wheel borer from the Niles-Bement-Pond Company.

THE DELAWARE, LACKAWANNA & WESTERN has ordered one 25-ton locomotive crane from the Industrial Works.

THE TERMINAL RAILWAY ASSOCIATION has ordered a 3¼-in. vertical turret lathe from Manning, Maxwell & Moore, Inc.

THE CANADIAN NATIONAL has ordered a 4-in. tube cutter and 2 frame jaw grinders from Manning, Maxwell & Moore, Inc.

THE FLORIDA EAST COAST has ordered a 2,000-lb. steam hammer and a 500-lb. helve hammer from Manning, Maxwell & Moore, Inc.

THE PITTSBURGH & LAKE ERIE has ordered a 100-in. vertical boring and turning mill from the Niles-Bement-Pond Company.

THE CHESAPEAKE & OHIO has ordered a Putnam combination car journal and axle lathe from Manning, Maxwell & Moore, Inc.

THE CHICAGO, ROCK ISLAND & PACIFIC has ordered a 53-in. vertical boring and turning mill from the Niles-Bement-Pond Company.

THE MCCLINTIC-MARSHALL COMPANY has ordered a 42-in. rotary planer and a 60-in. rotary planer from the Niles-Bement-Pond Company.

THE NEW YORK CENTRAL has ordered 2 18-in. by 10-ft. engine lathes, a 2-in. pipe machine and a 50-ton bushing press from Manning, Maxwell & Moore, Inc.

THE BALTIMORE & OHIO is inquiring for four 25-ton locomotive cranes. This company has ordered a 90 in. journal turning lathe from Manning, Maxwell & Moore, Inc.

THE BROOKLYN CITY RAILROAD has ordered three motor driven engine lathes consisting of one 14-in. by 8-ft., one 20-in. by 10-ft., and one 24-in. by 12-ft.; this company also ordered a sensitive drill and a 24-in. punch and shear, all from Manning, Maxwell & Moore, Inc.

### Iron and Steel

THE SEABOARD AIR LINE is inquiring for 400 tons of steel for bridges.

THE SOUTHERN RAILWAY is inquiring for 250 tons of steel for two bridges.

THE CHICAGO, MILWAUKEE & ST. PAUL has ordered 170 tons of structural steel from the Wisconsin Bridge & Iron Co.

THE SOUTHERN PACIFIC has ordered 500 tons of structural steel for a freight station at Houston, Tex., from the Houston Structural Steel Company.

THE MISSOURI-KANSAS-TEXAS has divided an order for 375,000 tie plates between the Tennessee Coal, Iron & Railroad Co. and the Illinois Steel Company.

## Supply Trade News

**Charles Kandel** has been appointed sales manager of the **International Oxygen Company**, Newark, N. J.

**Blaine S. Smith**, general sales manager of the **Universal Portland Cement Company**, Chicago, has been elected a vice-president.

The **Watson-Stillman Company**, on May 1, will remove its main office and sales department from 50 Church street to 75 West street, New York City.

**J. E. Murray**, eastern sales manager and eastern export sales manager of the **Buda Company**, with headquarters at New York, has resigned to engage in other business.

The **Ohio Injector Company**, Wadsworth, Ohio, has opened sales offices in Tulsa, Okla., and Ft. Worth, Tex., in charge of **V. H. Morgenstern** and **C. H. Brown**, who were formerly associated with the **Continental Supply Company**, St. Louis, Mo.

**Joseph T. Ryerson & Son, Inc.**, Chicago, has completed arrangements with **F. A. Brandes** of the **Brandes Machinery Company**, Keith building, Cleveland, Ohio, to represent them exclusively for this company's line of metal working machinery and small tools.

**Harold A. Hegeman** has been elected first vice-president and treasurer of the **National Railway Appliance Company**, New York, **Charles C. Castle** having resigned as first vice-president to go with the **American Car & Foundry Motors Company**. **W. C. Peters**, manager of sales and engineering of the **National Railway Appliance Company**, has been elected vice-president in charge of engineering and sales, with headquarters at New York.

**L. E. W. Bailey**, who for some years past has been railroad sales manager for the **Dearborn Chemical Company, Ltd.**, at Toronto, Canada, has joined the **Superheater Company, Ltd.**, of Montreal, as service engineer. Previous to his connection with the **Dearborn Company**, Mr. Bailey served with the **Canadian Pacific** and the **Great Northern railways**, having worked his way up in the motive power department from fireman and engineman to division master mechanic.

**C. R. Speaker**, Washington, D. C., now represents the **Roller-Smith Company**, New York, in addition to the District of Columbia, in the states of Maryland, Virginia and North Carolina, which were formerly covered by **J. E. Perkins**, Baltimore. The **Tennessee Engineering & Sales Company**, Nashville, Tenn., now includes in its territory the states of Georgia, Florida and South Carolina, in addition to eastern Tennessee, as the territory in which it represents the **Roller-Smith Company**. The former arrangement with **W. A. McCombs & Co.**, Pittsburgh, Pa., has been transferred to a new organization, the **D-C Sales Engineering Company**, at the same address; **T. M. Cluley**, who was formerly manager of **W. A. McCombs & Co.**, and **G. S. Denithorne** are identified with the new company.

**R. M. Alvord**, sales manager of the San Francisco office of the **General Electric Company**, and manager of its merchandise department, has been appointed manager of the San Francisco office, to succeed **E. O. Shreve**, recently appointed manager of the industrial department, with headquarters at Schenectady, N. Y. Mr. Alvord was born in Scales Mound, Ill., on March 11, 1883. He graduated from Iowa State College in 1904, and in October of that year, entered the test at the Schenectady works. Two years later, he was transferred to the supply department of the San Francisco office and has since remained on the Pacific coast. In December, 1910, Mr. Alvord was appointed manager of the supply department at San Francisco and, in October, 1920, became manager of the lamp depart-

ment in addition to being manager of the supply department. In May, 1923, he was appointed sales manager of the San Francisco office and, two years later, he was given the additional responsibility of manager of the merchandise department.

**J. F. Davis** of the general staff department of the **Graybar Electric Company**, New York, has been appointed manager of its Pittsburgh distributing branch. Mr. Davis was born at Newport, Ind., in 1885, and graduated from **Purdue University** in 1909. In 1911, he entered the service of the **Western Electric Company** as a salesman in the Chicago office, and in 1919, was transferred and promoted as sales manager of the Boston branch. In January, 1923, Mr. Davis was appointed sales manager of the New York branch of the **Western Electric Company**, and later served in the same position with the **Graybar Electric Company** until about a month ago, when he was appointed to the general staff department of the company. **C. D. McClary**, manager of the Pittsburgh distributing branch of the **Graybar Electric Company**, has been promoted to sales manager of the Philadelphia distributing branch. He was born at Phillipsburg, N. J., and graduated from **Lafayette College** in 1907. After graduation, he entered the service of the **Western Electric Company** at Pittsburgh. He subsequently held various positions until 1918, when he was appointed sales manager at Pittsburgh and in 1924 he became manager.

**H. B. Pfisterer**, formerly sales engineer for the **Hazard Manufacturing Company**, Chicago, has been appointed railroad sales engineer for **S. M. Bowser & Co., Inc.**, Fort Wayne, Ind., with headquarters at Chicago. He was born in California, Pa., on March 4, 1878. During 1896 and 1897 he worked in various departments of the **Westinghouse Electric & Manufacturing Co.** at East Pittsburgh, Pa. In March, 1898, he entered the employ of the **Chicago & Eastern Illinois** at Danville, Ill., working in various departments and finally entering the signal department. He was promoted to division signal maintainer in January, 1901, with headquarters at Mt. Vernon, Ill., and remained in that position until January, 1904, at which time he entered the signal department of the **Nashville, Chattanooga & St. Louis** at Nashville, Tenn., occupying the positions of signal foreman, general signal foreman, signal supervisor and general signal inspector. On May 1, 1917, he was appointed sales engineer for the **Hazard Manufacturing Company**, which position he has held until his recent appointment.



H. B. Pfisterer

The **Westinghouse Electric & Manufacturing Company** has made a complete reorganization of its sales department, involving the reallocating of the managing personnel and the creating of several new activities. The change, which involves all departmental sales managers of the company, consists of the following appointments: Assistant to vice-president, **E. H. Sniffin**, formerly manager, power department; director of sales, **T. J. Pace**, formerly manager, supply department; central station manager, **G. H. Froebel**, formerly manager, marine department; industrial sales manager, **J. M. Curtin**, formerly manager, industrial department; transportation sales manager, **M. B. Lambert**, formerly manager, railway department; assistant director of sales, **A. C. Streamer**, formerly assistant to manager, supply department; generating apparatus manager, **H. W. Smith**, formerly general engineer; traction apparatus manager, **A. J. Manson**, formerly manager, heavy traction division, railway department; motor apparatus manager, **O. F. Stroman**, formerly assistant to manager, industrial department; switch-gear apparatus manager, **R. A. Neal**, formerly head of



switch section, supply department; distribution apparatus manager, **G. A. Sawin**, formerly assistant to manager, supply department.

### Western Electric Company

The gross earnings of the Western Electric Company for the year 1923 totaled \$23,941,740, which, after deducting the depreciation on the plant, an addition to the employees' benefit fund and a pension fund, left net current earnings available for interest and dividends amounting to \$16,073,981. After interest deductions and dividends, \$7,424,322 was carried to surplus. Supplementing the earnings from regular operations, the company received \$15,955,096 in the form of special dividends from the International Western Electric Company and from the profits obtained in the sale of that property. Deductions for premiums on the redemption of preferred stock amounting to \$2,467,960, left a balance from special earnings carried to surplus of \$13,487,136. Sales and other income amounted to \$299,903,974, as compared with \$298,281,138 in 1924. Unfilled orders on December 31 aggregated \$96,270,000, as compared with \$92,014,000 at the end of 1924. The assets and liabilities totaled \$216,204,447, the total working assets being \$125,336,388 and the total reserves \$58,290,303.

On September 30 the entire capital stock of the International Western Electric Company, Inc., was sold to the International Telephone & Telegraph Corporation. On December 31 the company's supply department, which conducts a merchandising business in all kinds of electrical supplies, was turned over to a new corporation, the Graybar Electric Company, Inc., which has a capital stock of \$15,000,000. The report of the latter company is included in the report of the Western Electric Company. The income account of the Western Electric Company as of December 31, 1925, follows:

	1925	1924
Sales .....	\$297,729,420	\$298,281,138
Other income .....	2,174,554	1,212,004
	299,903,974	299,493,142
Cost of merchandise .....	251,915,705	258,147,923
Expenses .....	20,217,638	19,331,724
Taxes .....	4,628,891	3,945,099
	276,762,234	281,424,746
Balance .....	23,141,740	18,068,396
Appropriated for:		
Additional depreciation on plant .....	\$2,167,759	\$1,562,539
Addition to employees' benefit fund .....	3,500,000	2,000,000
Pension fund under agreement with Graybar Electric Company, Inc. ....	1,400,000	.....
	7,067,759	3,562,539
Net current earnings available for interest and dividends .....	16,073,981	14,505,859
Interest deductions .....	\$1,790,679	\$4,378,927
Dividends:		
On preferred stock 7 per cent per annum to September 15, 1925 .....	1,233,980	1,727,572
On common stock, \$10 per share outstanding .....	5,625,000	5,000,000
Total interest and dividend requirements .....	8,649,659	11,106,499
Balance from current earnings carried to surplus .....	\$7,424,322	\$3,399,358
Special dividend received from the International Western Electric Company, Inc., from undistributed earnings at September 30, 1925 .....	\$9,700,000	.....
Profit resulting from sale of International Western Electric Company, Inc., after deducting federal income taxes and setting aside a reserve for pension fund under agreement with International Standard Electric Corporation ..	6,255,096	.....
	\$15,955,096	.....
Deduct:		
Premium paid on redemption of preferred stock .....	2,467,960	.....
Balance from special earnings carried to surplus .....	\$13,487,136	.....

### Obituary

**Mathew K. Garrett**, assistant treasurer of the Union Switch & Signal Company at Swissvale, Pa., died on April 6, at his home in Wilksburg, at the age of 66.

**Clarence Price**, formerly with the American Car & Foundry Company as sales agent and later as vice-president, from 1903 until his retirement in 1916, died at his home in New York, on April 2. Mr. Price was born on July 28, 1862, in Cincinnati, Ohio, and graduated from Princeton University, in 1885. He entered railway service in January, 1900, as purchasing agent of the Chicago & Alton, leaving that position in March, 1903, to go with the American Car & Foundry Company.

## Railway Construction

**BALTIMORE & OHIO.**—Bids have been asked for the construction of a 500-ton capacity concrete coaling station at Akron Junction, Ohio.

**BALTIMORE & OHIO.**—A contract has been awarded to the Vang Construction Company, Cumberland, Md., for the erection of bridge foundations and a retaining wall, on the Akron division at Pittsburgh, Pa. The foundations and wall will cost approximately \$50,000, respectively.

**DELAWARE, LACKAWANNA & WESTERN.**—A contract for grade crossing elimination at Broad street, Clifton, N. J., has been awarded to H. F. Curtis, New York.

**DODGE CITY & CIMARRON VALLEY.**—This company has applied to the Interstate Commerce Commission for authority for the construction of a line from Manter, Kan., westerly and southwesterly, to a point near Joycoy postoffice, Baca county, Colo., 56 miles, to be operated by the Atchison, Topeka & Santa Fe.

**ILLINOIS CENTRAL.**—Plans are being prepared for the construction of a one-story brick shop building, 165 ft. by 339 ft., at Chicago, to cost \$270,000.

**LOUISVILLE & NASHVILLE.**—A contract has been awarded to the McClintic-Marshall Company, Pittsburgh, Pa., for bridgework at various locations.

**LOUISVILLE & NASHVILLE.**—This company has awarded a contract for the construction of several bridges to the Virginia Bridge & Iron Co., Roanoke, Va.

**LOUISIANA RAILWAY & NAVIGATION Co.**—It is reported that this company is planning the construction of a 20-mile extension in southern Louisiana. The project would include the construction of a steel bridge across the Atchafalaya river at Simmsport, La.

**MAINE CENTRAL.**—A contract has been awarded to Fairbanks, Morse & Co., Chicago, Ill., for the construction of coaling plants at Bangor, Me., Lewiston and Rumford at a total estimated cost of \$105,000.

**MISSOURI PACIFIC.**—The Virginia Bridge & Iron Co., Roanoke, Va., will build several bridges in Missouri for this company.

**MISSOURI PACIFIC.**—A committee of officers of the Missouri Pacific, the Texas & Pacific, the St. Louis Southwestern and the Kansas City Southern, has been formed to supervise the construction of a union passenger station at Texarkana, Ark. A terminal company will be organized to undertake the construction and operation of the property. Plans for the station, which have been prepared, indicate that the project will cost approximately \$1,700,000, and it is expected that bids for this work will soon be received.

**MONTE CRISTO MINING COMPANY.**—Ezra Thayer, president, Wickenburg, Ariz., has announced that surveys are being made for the construction of a 12-mile standard gage railroad from Wickenburg to a mine in the Black Rock district. The construction of the line is estimated to cost \$780,000.

**NEW YORK, NEW HAVEN & HARTFORD.**—This company has authorized the extension of three yard tracks at South Worcester, Mass., at an approximate cost of \$119,000; the construction of 6 additional yard tracks at Cedar Hill (New Haven), Conn., at an approximate cost of \$120,000; and the consolidation of electric service at Hartford, Conn., estimated to cost \$35,800. A contract for the construction of a 7-stall extension to the enginehouse at South Worcester, Mass., to cost approximately \$88,000, has been awarded to the E. J. Cross Company, Worcester.

**NORFOLK & WESTERN.**—A contract for the construction of several shop buildings at Portsmouth, Ohio, has been awarded to J. P. Pettyjohn & Co., Lynchburg, Va.

PENNSYLVANIA.—Bids have been asked for the construction of a 650-ton capacity reinforced concrete coaling station at Fort Wayne, Ind.

PENNSYLVANIA.—The Illinois Commerce Commission has ordered the construction of a subway under the railway's tracks east of Highland, Ill., to eliminate a dangerous grade crossing. The subway will cost approximately \$65,000 which will be shared by the railway and the highway department of the state of Illinois.

PENNSYLVANIA.—A contract has been awarded to the T. J. Foley Company, Pittsburgh, Pa., for remodeling this company's warehouse at Pittsburgh at an approximate cost of \$100,000. Contracts have been awarded to the same company for an additional yard at Wierton, W. Va., to cost \$130,000, and improvements to the scrap dock at Conway, Pa., to cost approximately \$25,000.

PENNSYLVANIA.—A contract for waterproofing street bridges in connection with track elevation at Cleveland, Ohio, has been awarded to the H. E. Culbertson Company of that city; estimated cost, \$35,000. A contract for furnishing the steel superstructure for an extension of the Harold avenue bridge, Long Island City, N. Y., over the company's Sunnyside Yards has been awarded to the American Bridge Company, Ambridge, Pa.; estimated cost \$50,000. A contract for the construction of a signal tower at Bayard, Ohio, has been awarded to Harsh & Richardson, Minerva, Ohio. New bridges on the low grade line under construction from Canton, Ohio, to Bayard, will be built by the Seaboard Construction Company, Philadelphia, Pa.

ST. LOUIS-SAN FRANCISCO.—Bids have been asked for the remodeling of a passenger station at Fayetteville, Ark.

ST. LOUIS-SAN FRANCISCO.—An application will be filed with the Interstate Commerce Commission for permission to build an extension from Aberdeen, Miss., to Kimbrough, Ala.

ST. LOUIS-SAN FRANCISCO.—A contract has been awarded to W. W. Johnson, Springfield, Mo., for the construction of a two-story, brick and stucco passenger station at Springfield, to cost \$100,000, as reported in the *Railway Age* of February 20.

ST. LOUIS-SAN FRANCISCO.—Bids will be received until April 12 for the construction of a passenger station at Fayetteville, Ark., to cost approximately \$40,000. The station will be one-story in height and of brick and hollow tile construction, with tile roof and concrete floors.

SOUTHERN ILLINOIS & KENTUCKY.—Bids have been asked for the construction of a 500-ton capacity concrete coaling station at East Blufford, Ill.

SOUTH GEORGIA.—The Interstate Commerce Commission has made public a proposed report by Examiner R. M. Brown recommending denial of this company's application for authority to construct a line from Hampton Springs to Deadman's Bay, Fla., 35 miles.

STATE OF ALABAMA.—The Interstate Commerce Commission has authorized the Docks Commission of this state to construct a line at Mobile connecting docks now being built with the Louisville-Nashville, the Southern, the Mobile & Ohio and the Gulf, Mobile & Northern and extending to a point in North Mobile (5.69 miles); estimated cost of construction, \$1,608,189.

TERMINAL RAILROAD ASSOCIATION OF ST. LOUIS.—Plans have been prepared for the construction jointly by the railway and the city of East St. Louis, Ill., of a subway to carry State street, East St. Louis, under the tracks of the railway between Eighteenth and Twentieth streets.

UNION PACIFIC.—A contract has been awarded to Walter Knutzen & Son, Kearney, Neb., for the construction of a freight and passenger station at Cozad, Neb. The station will be 118 ft. in length and will be of brick and tile construction.

UNION PACIFIC.—This company has applied to the Interstate Commerce Commission for authority for the construction of two extensions, from Lyman, Neb., south 6 miles with a 2-mile spur, and from Gering, Neb., south for 6 miles.

WABASH.—Plans are reported being prepared for the construction of a one-story car repair shop at Detroit, Mich., to cost \$100,000 with equipment.

## Railway Financial News

ALABAMA & VICKSBURG.—1925 *Earnings*.—Annual report for 1925 shows net income after interest and other charges of \$642,076 as compared with \$461,347 in 1924. Selected items from the income statement follow:

ALABAMA & VICKSBURG			
	1925	1924	Increase or decrease
Railway operating revenues.....	3,593,595	3,601,427	—7,832
Maintenance of way.....	528,760	622,245	—93,485
Maintenance of equipment.....	592,260	705,003	—112,743
Transportation .....	1,170,460	1,182,112	—11,652
Total operating expenses and taxes....	2,952,832	3,121,108	—168,276
Net revenue.....	640,763	480,319	160,444
Equipment rents—Cr.....	62,918	30,452	31,466
Joint facility rents.....	29,306	33,250	—3,844
Gross income.....	790,830	602,180	188,650
Interest on funded debt.....	125,000	121,378	3,622
Total deductions from gross income....	148,755	140,806	7,949
Net income.....	642,076	461,374	180,702

ATLANTIC COAST LINE.—*Acquisition*.—This company's application for authority to acquire control of the Columbia, Newberry & Laurens by purchase of its stock has been set for hearing before Examiner Davis of the Interstate Commerce Commission at Washington on April 16.

BALTIMORE & OHIO.—*Acquisition*.—The application for authority to acquire control of the Cincinnati, Indianapolis & Western by purchase of its capital stock has been set for hearing before Examiner Davis of the Interstate Commerce Commission at Washington on April 14.

BOSTON & MAINE.—*Abandonment*.—Examiner M. S. Jameson of the Interstate Commerce Commission in a tentative report recommends a finding by the commission authorizing the abandonment of the Kennebunkport branch of 4½ miles in York county, Maine.

BOSTON & MAINE.—*Meeting Postponed*.—The adjourned meeting of the stockholders held in connection with the plan for reorganization of the company's financial structure was further postponed on April 5 until May 4.

*Seeks Proxies*.—Nathan L. Amster who is now a large stockholder in the Boston & Maine has addressed to the stockholders a circular soliciting proxies for the annual meeting on April 14. In the circular he points out the desirability of having a minority representation on the Boston & Maine Board of Directors and says further:

"Nearly a year and a half has now passed, and although repeated public announcements have been made as far back as last summer, that ninety odd per cent of the bonds and eighty odd per cent of the stock have approved the readjustment, the plan has not been made operative and the situation is as confused and uncertain today as when the plan was first proposed.

"At the last annual meeting, although I voted 65,000 shares the Boston & Maine management refused to allow me to name a single director, but, as usual, elected the entire board from their own men. While I have the highest respect for the members of the board, it has nevertheless been proved that the majority of the board of directors lack experience in railroad operation and financing, and are certainly not competent to direct the railroad with its \$300,000,000 property value and annual income of over \$82,000,000 in the best interest of the stockholders.

"As the board now stands (and as it has stood these generations past) the entire affairs of the company are swayed by a small coterie of men, and just now by a single individual—Mr. Loring—who, although exhibiting ability in many directions, is woefully inexperienced in handling railroad matters and large financial affairs. This has already been demonstrated by the fallacy of his impracticable and unnecessary financial readjustment scheme which he thrust upon the helpless stockholders, but which is still unworkable."

BROWNWOOD NORTH & SOUTH.—*Abandonment*.—The Interstate Commerce Commission has issued a certificate authorizing the abandonment of that part of this company's line extending from Brownwood North & South Junction, Tex., northwesterly to May, 17.65 miles. The territory served by this line is shown to be served to some extent by other carriers and the records show that the line had suffered severely from motor truck and bus competition.

CENTRAL OF GEORGIA.—1925 *Earnings*.—Annual report shows net income after charges of \$3,105,113 equivalent to \$15.52 a share on the common stock. Net income in 1924 was \$2,236,294 or \$11.18 a share. See excerpts from annual report on adjoining pages.



**CHICAGO & ALTON.—Joliet & Chicago Re-elects Directors.**—The officers and directors of the Joliet & Chicago, which is under lease to the Chicago & Alton, were re-elected at the annual meeting in Chicago on April 5. The action of the stockholders is termed a victory by the Walker group of independent stockholders who are making an effort to terminate the lease of this road by the Chicago & Alton. At the meeting 12,480 shares out of 15,000 shares were voted, of which 7,711 supported Joseph Walker. This is the largest representation of stock at any meeting in the 70 years of the company's history.

The Joliet & Chicago, which comprises the 37-mile main line of the Chicago & Alton between Chicago and Joliet, was chartered on February 15, 1855, and was leased in perpetuity on January 1, 1864, to the Chicago & Alton at an annual rental of 7 per cent on the stock and \$2,000 per annum for organization expenses. On November 2, 1923, the stockholders' protective committee filed a suit in the district court at Chicago against the Chicago & Alton for the complete restoration of the property of the Joliet & Chicago and the termination of the lease on account of numerous alleged breaches of contract on the part of the Alton company.

Following the election Joseph Walker announced the intention to press to the utmost its pending suit against the Chicago & Alton for the cancellation of its lease. He also stated that his company had no intention of allowing the proceedings for the Alton's reorganization to delay or jeopardize the redress to which the Joliet company is entitled.

**CHICAGO, MILWAUKEE & ST. PAUL.—I. C. C. Representative Alleges Errors in Records.**—Hearings in the Interstate Commerce Commission investigation were resumed in New York on April 7. The first witness was W. H. Carleton, field supervisor of the commission's Bureau of Accounts, who read a prepared statement based on the results of the examination the commission's representatives have been making of the St. Paul accounts. The important feature of his testimony was a tabulation of suggested corrections of figures in Exhibit 72 which exhibit was introduced by the St. Paul to show by its acquisition of the Chicago, Terre Haute & Southeastern there had been saving in "actual cost of haul in comparison with freight charges at tariff rates for a period of four years" amounted to \$2,042,018.

The suggested corrections follow:

1. Estimated overstatement of Terre Haute operating revenues, due to failure to deduct any amounts representing charges for switching services performed by the St. Paul in connection with shipments from and to industries located on the tracks of the St. Paul within the Chicago switching district—the road haul revenue on such shipments having been credited to the Terre Haute; corrected by deducting \$771,924.
2. Estimated understatement of Terre Haute operating expenses prior to May, 1925, due to insufficient charges for depreciation of equipment; corrected by deducting \$285,400.
3. Estimated understatement of Terre Haute operating expenses due to insufficient charges for stationery and printing; corrected by deducting \$55,413.
4. Estimated understatement of Terre Haute operating expenses due to insufficient charges for superintendence—maintenance of way and structures, maintenance of equipment and transportation; corrected by deducting \$248,750.
5. Estimated understatement of Terre Haute operating expenses due to insufficient charges for locomotive repairs; corrected by deducting \$37,130.
6. Estimated understatement of Terre Haute operating expenses due to insufficient charges for engine house expenses prior to June, 1925—principal omission being the expenses of caring for Terre Haute Division locomotives at Bensonville; corrected by deducting \$47,200.
7. Estimated understatement of "taxes, equipment and joint facility rents" due to omission of charges for switching claims due the St. Paul on cars handled by that company in the Chicago switching district between July 1, 1921, and December 31, 1924, the road haul service of which was on the Terre Haute Railway; corrected by deducting \$307,370.

#### QUESTIONS COAL CAR CHARGES

8. Understatement of "taxes, equipment and joint facility rents" due to cancellation of per diem charges assessed against the Terre Haute by the St. Paul for the period October 1, 1924, to June 30, 1925, on the latter's empty coal cars while on the rails of the former, in excess of the estimated average daily coal car requirement; corrected by deducting \$238,298.
  9. Understatement of "annual rental of Terre Haute" due to omission of Terre Haute's corporate expense paid by the St. Paul; corrected by deducting \$7,378.
  10. Estimated understatement of "St. Paul operating expenses" due to failure during period, January 1 to June 30, 1925, to include any charges covering running repairs to locomotives used on through runs; corrected by deducting \$12,226.
  11. Understatement of "Gary Railway taxes, equipment and joint facility rents, etc.," due to cancellation of per diem charges for the St. Paul and the Terre Haute equipment on the line of the Gary for period, June 1, 1923, to June 30, 1925; corrected by deducting \$434,319.
- Total suggested corrections, \$2,445,229.
- The aggregate of the corrections suggested above should be deducted from the item, "saving actual cost of haul in comparison with freight charges at tariff rates." When such deduction is made the aforesaid saving is thereby changed to a deficit, or loss in the amount of \$403,210.

**DENVER & RIO GRANDE WESTERN.—Abandonment.**—The Interstate Commerce Commission has issued a certificate authorizing the Kenilworth & Helper and the Denver & Rio Grande Western,

lessee, to abandon the line of the Kenilworth & Helper, which extends from Kenilworth Junction, Utah, to Kenilworth, 3.75 miles. Similarly a certificate has been issued authorizing the Denver & Rio Grande Western to construct a new branch line from Spring Canyon Junction in a general easterly direction, 6.28 miles. The Kenilworth is leased by the Denver from its owners, the Independent Coal & Coke Company, which purposes to open up new coal operations which the present line will not be adequate to serve.

**DETROIT & Ironton.—Objection to Petition for Testimony by Henry Ford.**—Counsel for this company have filed with the Interstate Commerce Commission an objection to the petition of minority stockholders of the Detroit, Toledo & Ironton which asked the commission to re-open the hearing on the application for authority to take over the D. T. & I. by the exchange of securities for the purpose of taking the testimony of Henry Ford. They assert that the petition is filed for the purpose of harassing the applicant, that Mr. Ford's testimony could add nothing substantial to the record, that the minority stockholders had stated upon the record that they would not participate in the reorganization if given an opportunity, and that therefore the request for the evidence of Mr. Ford as to why they have been refused the right to participate in the exchange of securities of the new company for those of the old presents a moot question.

**ENSLEY SOUTHERN.—Acquired by Inland Waterways Corporation.**—Official announcement was made at Birmingham, Ala., on March 22, by R. A. Brown of that city, a member of the advisory board of the Inland Waterways Corporation, that the Inland Waterways Corporation, by unanimous vote, with the approval of the secretary of war, had recommended the purchase of the Ensley Southern by the Inland Waterways Corporation. Recently citizens of Birmingham subscribed \$500,000 to the Port of Birmingham Corporation for the purchase of the railway, which money will now be returned. The road has been in receivership and was purchased from the Southern Railway which owned it. The purpose of the acquisition by the Inland Waterways Corporation is to permit operation of the line in connection with the Warrior River Barge Line service and the Port of Birmingham.

**ERIE.—Equipment Trust.**—The Interstate Commerce Commission has authorized the issuance of \$2,190,000 equipment trust certificates, series LL, to be sold at 97. These certificates will bear 4½ per cent interest, will be dated March 3, 1926, and will mature in semi-annual installments beginning September 1, 1926, and ending March 1, 1941. The equipment includes 2 locomotives and 124 passenger coaches having a total approximate cost of \$2,747,628.

**JACKSON & EASTERN.—Bonds.**—This company has been authorized by the Interstate Commerce Commission to issue \$300,000 first mortgage 5-year 6 per cent bonds to be sold at not less than par, the proceeds to be used in connection with the construction of a line from Sebastopol, Miss., to Jackson, 61 miles, previously authorized. At Jackson the line connects with the Alabama & Vicksburg.

**LONG ISLAND.—Equipment Trust.**—The Interstate Commerce Commission has authorized the issuance of \$1,230,000 4½ per cent equipment trust, to be sold to Kuhn, Loeb & Co. at 97. These certificates will be dated March 1, 1926, and will mature in equal annual installments, beginning March 1, 1927, and ending March 1, 1941. The equipment includes 20 steel passenger coaches, 7 electric locomotives, 2 car floats and 1 tugboat, having a total approximate cost of \$1,651,530.

**MINNEAPOLIS & ST. LOUIS.—Receivers' Certificates.**—The receiver has applied to the Interstate Commerce Commission for authority to issue \$1,750,000 of six-months receivers' certificates for the purpose of renewing obligations of a like amount now outstanding.

**MAINE CENTRAL.—1925 Earnings.**—Annual report for 1925 shows net income after interest and other charges of \$1,177,000, equivalent after allowance for 5 per cent dividends on the preferred stock to \$6.89 a share on the 12,006,900 outstanding common stock. Net income in 1924 was \$389,022 or \$1.60 a share on the common stock.

Selected items from the income statement follow:

(Continued on page 1048)

# Annual Reports

## Twenty-Eighth Annual Report of Reading Company, for the Year Ended December 31, 1925

Philadelphia, Pa., March 17, 1926

To the Stockholders of Reading Company:

The Board of Directors submits herewith its 28th Annual Report.

The income for the year ended December 31, 1925, as compared with the income for the year 1924 was as follows:

	1925	1924
Railway Operating Revenues .....	\$91,496,379.37	\$92,088,258.39
Railway Operating Expenses .....	68,633,515.58	70,306,556.23
Net Revenue from Railway Operations .....	\$22,862,863.79	\$21,781,702.16
Railway Tax Accruals .....	\$4,349,772.14	\$4,284,017.70
Uncollectible Railway Revenues .....	5,611.86	6,010.17
Total Taxes and Uncollectible Railway Revenues .....	\$4,355,384.00	\$4,290,027.87
Total Operating Income .....	\$18,507,479.79	\$17,491,674.29
Non-Operating Income .....	1,847,149.40	1,476,066.98
Net Railway Operating Income .....	\$20,354,629.19	\$18,967,741.27
Other Non-Operating Income .....	5,220,323.65	4,668,775.56
Gross Income .....	\$25,574,952.84	\$23,636,516.83
Deductions from Gross Income .....	8,415,333.85	8,515,200.68
Net income .....	\$17,159,618.99	\$15,121,316.15
Income Appropriated for Investment in Physical Property .....	\$4,090,291.59	\$3,577,343.23
Income Appropriated for Sinking Fund and Reserve Funds .....	46,243.51	47,031.17
Total Appropriations of Income .....	\$4,136,535.10	\$3,624,374.40
Income Balance Transferred to Profit and Loss .....	\$13,023,083.89	\$11,496,941.75

### Additions and Betterments

During the fiscal year ended December 31, 1925, the sum of \$13,799,016.15 (of which \$8,858,638.19 was charged to income or surplus) was expended by Reading Company in additions and betterments to its road and equipment.

The expenditures in 1925 are classified as follows:

Engineering .....	\$115,303.17
Land for transportation purposes .....	67,917.95
Grading .....	911,093.28
Tunnels and subways .....	19,031.66
Bridges, trestles and culverts .....	201,853.48
Ties .....	30,654.92
Rails .....	397,168.02
Other track material .....	329,872.42
Ballast .....	8,618.80
Track laying and surfacing .....	53,878.19
Right-of-way fences .....	642.23
Snow and sand fences and snowsheds .....	433.06
Crossings and signs .....	188,075.30
Station and office buildings .....	388,957.57
Roadway buildings .....	41,264.96
Water stations .....	24,588.37
Fuel stations .....	140,999.47
Shops and enginehouses .....	526,880.61
Wharves and docks .....	12,371.19
Coal and ore wharves .....	140,217.21
Telegraph and telephone lines .....	40,420.95
Signals and interlockers .....	226,541.30
Power plant buildings .....	12,014.46
Power substation buildings .....	2,501.20
Power transmission systems .....	25,441.82
Power distribution systems .....	13,775.84
Power line poles and fixtures .....	3,407.89
Underground conduits .....	1,064.39
Miscellaneous structures .....	7,110.42
Paving .....	72.03
Roadway machines .....	24,436.34
Assessments for public improvements .....	22,913.90
Other expenditures—Road .....	8.40
Shop machinery .....	23,839.62
Power plant machinery .....	798.53
Power substation apparatus .....	15,156.77
Total expenditures for road .....	\$3,956,520.02
Steam locomotives .....	\$1,783,011.00
Freight train cars .....	6,190,394.53
Passenger train cars .....	1,324,802.99
Floating equipment .....	282,048.33
Work equipment .....	110,876.20
Miscellaneous equipment .....	3,549.73
Total expenditures for equipment .....	\$9,694,682.78
Interest during construction .....	147,813.35
Grand Total .....	\$13,799,016.15

Among the larger items of Additions and Betterments upon which expenditures were made during 1925 were the following:

[ADVERTISEMENT]

### Bethlehem, Pa.

The Union Passenger Station, under construction jointly by Reading Company and the Lehigh Valley Railroad Company, referred to in the previous report, was practically completed at the close of the year 1925. The waiting rooms, ticket office and other passenger facilities were placed in service on September 12, 1925. In connection with this new station, Reading Company is separately constructing island platforms and passenger and baggage tunnels for the convenience of its passengers.

### Birdsboro, Pa.

Construction was commenced during the year on the fourth track between Birdsboro and Monocacy, a distance of about one and one-half miles. This project involved the rebuilding of several bridges and the construction of a new interlocking plant. It is expected that the new track will be placed in service early in 1927.

### Harrisburg, Pa.

Through the consolidation of the interlocking plants which formerly existed at P. H. & P. Junction and at Mulberry Street, considerable economy will be effected in the operation of trains into and out of Harrisburg over the Lebanon Valley, Steelton and Philadelphia, Harrisburg and Pittsburgh branches.

### Lebanon, Pa.

The new enlarged freight house and office building necessitated by the rapid growth in business at this point is expected to be placed in service in March, 1926.

### Mine Hill Gap, Pa.

During 1925 Reading Company constructed a branch track of approximately one and one-quarter miles into the anthracite colliery and breaker of the Repplier Coal Company. It is anticipated that this extension of track will produce considerable tonnage for the Company. The track was practically completed at the close of the year.

### Philadelphia, Pa.

The construction of new ore unloading facilities at Pier 14, Port Richmond, was under way at the close of the year. Work was also under way on the enlargement of the office building at Port Richmond, and on the construction of an electric sub-station at Pier "G" for use in connection with the new Power Plant.

Reading Company purchased the two properties, Nos. 1109 and 1111 Market Street, Philadelphia, immediately east of the Reading Terminal Building, in order to provide for future expansion of its terminal facilities. A modern building will be erected and some of the floors thereof will be utilized immediately for offices while the balance will be rented until required for Company purposes.

Reading Company constructed during the year a coal yard at 29th and Brown Streets and reconstructed the yard at Fern Rock. These coal yards will be leased to individuals.

The highway which the Company constructed parallel to its tracks at West Manayunk, for the purpose of connecting Ashland Avenue and Belmont Avenue, was opened on May 26, 1925. Through the construction of this highway an overhead highway bridge was abolished.

Through changes made during the year to Pier 25, North Wharves, adjacent to the Willow and Noble Streets freight station of the Company, it will be possible to transfer freight directly from cars to vessels docked at the Pier. This will effect considerable economy in the handling of import and export freights and accelerate their movement, as well as attract new business for the Company.

### Port Clinton, Pa.

Work progressed during the year on the change of alignment of the railroad at this point, referred to in the 1924 report. The new section of road bed is expected to be placed in service in 1926.

### Reading, Pa.

On April 13, 1925, ground was broken by Reading Company in connection with the enlargement of its shop facilities at this point.



A structure 880 feet long by 335 feet wide, with the necessary appurtenant facilities, including wood working, cabinet, machine and blacksmith shops, electric cranes and compressed air equipment for gas welding, is the principal feature of this improvement. This structure is designed to handle economically and expeditiously the heavy repairs to freight and passenger cars. Upon completion of the new facilities, approximately 244 cars may be repaired at one time.

#### Ringtown, Pa.

Satisfactory progress on the change of alignment of the Catawissa Railroad and the abandonment of the high viaduct, referred to in previous reports, was made during 1925, and it is expected that these improvements will be completed before the close of 1926.

#### Rutherford, Pa.

The new coaling station facilities, referred to in the 1924 report, were practically completed at the end of the year.

#### Shenandoah, Pa.

An extensive addition to the freight house at this point was commenced during the year. This improvement was necessitated by the increased business being offered to the Company.

#### Trenton, N. J.

Additional facilities for unloading carload shipments in the Willow and Calhoun Streets freight yard of the Company were practically completed at the close of 1925.

#### Womelsdorf, Pa.

The extension of the fourth track to Robesonia was commenced during the year and is expected to be placed in service in 1926. This extension will be approximately two and one-half miles in length.

Expenditures were also made during 1925, upon the following principal improvements, some of which were begun in prior years:

- Replacing Bridge 78/31, Port Clinton.
- Installation boiler plant, East Penn Junction, Allentown.
- Construction Bridge No. 6, Allentown.
- Construction additional tracks, Hershey.
- Changing channel of Mahoning Creek and elimination of four bridges, Maudsley.
- Installation electric service connection, Newberry Junction.
- Construction new coaling facilities, Birdsboro.
- Construction siding for Shamokin Coal Company, Shamokin.
- Replacing overhead highway bridge 3/05, west of Wyomissing.
- Installation new petroleum tank, Port Reading creosoting plant.
- Installation traveling crane, 10th and Market Streets, Harrisburg.
- Construction additional span, Bridge 33/26, Trenton Junction.
- Replacing Bridge 109/87, north of Mahanoy City.
- Replacing Bridge 181/89, over Main Street, Montgomery.
- Construction driveway at Sheridan.
- Replacing Bridge No. 75/33, north of Hamburg.
- Reconstruction Bridge 0/28, east of Girardville.
- Reconstruction Bridge 36/09 at Perkaspie.
- Rebuilding pole line between East Mahanoy Junction and Milton.
- Installation electric crane in 19th Street and Indiana Avenue Yard, Philadelphia.

#### Elimination of Grade Crossings

Reading Company has continued its policy of eliminating grade crossings as rapidly as conditions permit.

On December 23, 1925, a contract was entered into with the City of Philadelphia for the elimination of grade crossings on the Norristown Branch between Wissahickon Creek and Fountain Street, Manayunk. Nine existing grade crossings will be eliminated through the elevation and change of alignment of the railroad tracks. Under the terms of the contract the cost of this work, estimated at \$3,500,000, will be shared equally by the Company and the City.

The grade crossing at Washington Lane, south of Jenkintown Station, was in process of elimination during the year through the construction of a concrete bridge carrying this highway over the tracks.

Overhead Bridge, No. 34/60, at Susquehanna Avenue, Allentown, constructed for the purpose of eliminating the grade crossing which formerly existed at Coopersburg Pike, was completed on August 1, 1925.

#### Authorizations for New York

The Board of Directors has authorized the following principal items of new work estimated to cost approximately \$2,500,000, to be undertaken or completed in 1926:

- New Y. M. C. A. Building at Reading.
- Change of alignment, replacing Bridge No. 139/05 and filling in of viaduct at Mainville, on Catawissa Railroad.
- Reconstruction and extension of Bridges 45/40 and 45/90 over Swatara and Beaver Creeks, Lebanon Valley Branch, account third and fourth tracks.
- Bridge over Loyalsock Creek at Montoursville.

Elimination of grade crossings at Auburn, Glenside, Green Point and Hamburg.

Elimination of grade crossing and construction of new passenger and freight station at Souderton.

Strengthening of a number of bridges on Main Line and New York Branch, required on account of the use of heavier equipment.

New electro-pneumatic Interlocking Plant at East Penn Junction, Allentown (Joint with C. R. R. of N. J.)

Extension to yard at East Penn Junction, Allentown.

Telephone train dispatching circuits on Wilmington and Columbia and Harrisburg Divisions.

Construction of new bridge at Rising Sun Avenue, over Richmond Branch, Philadelphia, to replace existing bridge.

#### Equipment

During the year 1925 the balance of the equipment mentioned in the 1924 report as being included in Reading Company Equipment Trust Series "K," dated March 1, 1923, was delivered to the Company and placed in service.

On January 9, 1925, the Interstate Commerce Commission, under its Finance Docket No. 4553, authorized Reading Company to assume obligation and liability on account of the rental required to redeem the \$8,000,000 par value of certificates issued under Equipment Trust Series "K" referred to in the 1924 report. All of these certificates were acquired by Reading Company and some of its subsidiary companies and are held in the treasuries thereof.

On March 2, 1925, Reading Company applied to the Interstate Commerce Commission for authorization to assume obligation and liability on account of the rental provided to redeem \$7,500,000 par value of 4½% Equipment Trust Series "L" certificates, dated October 1, 1924, maturing serially at the rate of \$375,000 semi-annually on April and October 1st of each year, beginning October 1, 1925, and ending April 1, 1935. Authorization was granted by the Commission on April 8, 1925, under its Finance Docket No. 4698.

All of the equipment included in Reading Company Equipment Trust Series "L" was delivered to Reading Company and placed in service during the year 1925.

During the year 1925 Reading Company arranged for the construction of the following additional equipment:

- 15 Baggage Cars.
- 2 Ferryboats ("Cape May" and "Philadelphia").
- 1 Oil-electric locomotive.
- 1000 Gondola Cars, 140,000 lbs. capacity.
- 6 Car Floats.
- 5 Switching Locomotives.
- 10 Caboose Cars.
- 1 Grain Barge.
- 1 150-ton Wreck Crane.
- 4 Burro Cranes for Track Laying.
- 2 Locomotive Cranes.
- 1 American Ditcher.
- 1 Track Scale Testing Car.

Arrangements were also made to install Dupont Simplex type "B" stokers on 60 locomotives then in service.

Of this equipment only the 6 Carfloats, 5 Switching Locomotives, 1 Wreck Crane, 4 Burro Cranes and 1 American Ditcher had been delivered to December 31, 1925.

Reading Company expended during 1925 the sum of \$250,018.50 on miscellaneous items of equipment required in roadway and maintenance work.

#### Equipment Trust Obligations

At the close of the fiscal year ended December 31, 1925, there were outstanding Equipment Trust obligations to the extent of \$19,320,000 issued by The Pennsylvania Company for Insurances on Lives and Granting Annuities, Trustee, and \$7,125,000 issued by the Philadelphia Trust Company, Trustee, under the so-called Philadelphia Plan. These obligations were as follows:

Series	Outstanding Dec. 31, 1924	Issued During Year	Payments During Year	Outstanding Dec. 31, 1925
F	\$1,200,000		\$600,000	\$600,000
G	2,250,000		900,000	1,350,000
H	1,140,000		190,000	950,000
I	4,800,000		600,000	4,200,000
J	6,650,000		830,000	5,820,000
K		\$8,000,000	1,600,000	6,400,000
L		7,500,000	375,000	7,125,000
	\$16,040,000	\$15,500,000	\$5,095,000	\$26,445,000

Of the \$26,445,000 Equipment Trust Certificates outstanding December 31, 1925, \$16,678,000 were owned by Reading Company, and \$1,982,000 by some of its subsidiary companies.

#### Grain Elevators

The construction of a new elevator building at 20th and Hamilton Streets, Philadelphia, for the domestic grain trade, to replace the structure which was destroyed by fire on March 11, 1924, mention of which was made in the 1924 report, progressed during the

year. On December 31st, 1925, the work was about ninety per cent completed, and it was anticipated that the new facilities would be placed in operation in March, 1926.

Plans were completed late in 1925 for the construction by The Philadelphia Grain Elevator Company of a modern concrete export grain elevator at Port Richmond, Philadelphia, with a capacity of 2,500,000 bushels, to cost approximately \$4,000,000. Actual construction work on these new facilities commenced on October 5, 1925.

In order to finance the construction of these new facilities, The Philadelphia Grain Elevator Company proposes to increase its capital stock from \$480,000 to \$1,500,000 and create an issue of \$3,000,000 First Mortgage 5% bonds.

#### Federal Valuation of Railroads

The physical valuation of Reading Company's property was continued during the year at a cost to the Company of \$81,000.40.

The total expenditure incurred to December 31, 1925, on account of Federal Valuation of Reading Company's property under the Act of Congress approved March 1, 1913, was \$910,881.83.

The valuation of the Company's property by the Commission had not been completed at the close of the year, nor had any tentative valuation report been received from the Federal authorities.

#### Suspension of Anthracite Mining

Notwithstanding the fact that all the anthracite mines in the territory served by Reading Company suspended operations from September 1, 1925, and had not resumed at the close of the year, with a consequent cessation in the movement of that commodity, owing to the inability of the mine workers and mine owners to negotiate a new working agreement, the net earnings of this Company exceeded those of the previous year. There was a sufficient increase in the volume of bituminous coal and general merchandise handled to offset this loss in the anthracite tonnage.

It is interesting to note a comparison of tonnage of these commodities handled during the fiscal years 1900, 1924 and 1925.

	1900	1924	1925
Tons anthracite carried .....	11,953,263	13,050,187	11,589,089
Tons bituminous carried .....	5,084,485	19,291,092	22,488,706
Tons merchandise carried .....	14,192,019	28,859,386	29,976,987
Total .....	31,229,767	61,200,665	64,054,782

Prior to 1897 anthracite constituted nearly one-half of the entire tonnage of the Company and any suspension of mining in the anthracite region resulted disastrously to the revenues of the Company. With the diversified traffic which the Company now enjoys, the dependence upon any one class of traffic is becoming less marked.

In 1895, the anthracite tonnage was over 55% of the total tonnage; in 1900, it was 38%; in 1924, 21%, and in 1925, only 18%.

#### Warrants

On September 21, 1925, the District Court of the United States for the Eastern District of Pennsylvania entered the following order extending for a further period of six months the time in which Warrants may be exchanged for Certificates of Interest, or Certificates of Interest for definite shares of the Philadelphia & Reading Coal & Iron Corporation:

"IN THE DISTRICT COURT OF THE UNITED STATES  
FOR THE EASTERN DISTRICT OF PENNSYLVANIA

THE UNITED STATES OF AMERICA  
Petitioner  
vs.  
READING COMPANY, et al.  
Defendants  
Sept. Sessions 1913  
No. 1095  
In Equity

#### ORDER IN RE DISSOLUTIONS PROCEEDINGS

"AND NOW, this 21st day of September, A. D. 1925, the Court having been orally advised in the premises, and being of opinion that in the exercise of its discretion the time, which was fixed in the Decree of this Court in the above entitled cause entered June 28, 1923, and in the warrants, issued by Reading Company pursuant thereto, within which the right to subscribe for Certificates of Interest in the shares of stock of the Philadelphia & Reading Coal & Iron Corporation and for the exchange of such Certificates for said shares or stock, should be extended, in each case respectively, for a period of six months:

"THEREFORE, on motion of Wm. Clarke Mason, Esq., counsel for Reading Company:

"It is ORDERED that the Holders of Warrants or fractional warrants, evidencing the right to subscribe for Certificates of Interest in shares of the capital stock without nominal or par value of Philadelphia & Reading Coal & Iron Corporation, a Delaware Corporation, shall have the right to subscribe for such Certificates of Interest, in the manner and upon the terms heretofore provided for, until July 1, 1926; and

"It is FURTHER ORDERED that the Holder of Certificates of Interest for shares of stock without nominal or par value of the said Philadelphia & Reading Coal & Iron Corporation, heretofore issued or hereafter to be issued upon the surrender of the aforesaid warrants in accordance with the plan of

reorganization, shall I have the right to exchange the same in the manner and upon the terms and conditions heretofore provided until January 1, 1927, and thereafter the provisions of paragraph (b) Section 3 of the Decree of this Court of June 6, 1921, as modified by Section 14, of the Decree of this Court of June 28, 1923, shall control the disposition of the aforesaid Certificates of Interest then outstanding and the shares of stock of Philadelphia & Reading Coal & Iron Corporation represented thereby.

(SGD) JOSEPH BUFFINGTON  
(SGD) J. WARREN DAVIS  
(SGD) J. WHITAKER THOMPSON"

Warrants had been exchanged to December 31, 1925, for Certificates of Interest in 659,744 shares of the Philadelphia & Reading Coal & Iron Corporation, leaving an unexchanged balance of 740,256.

#### Dividends

The following dividends were paid upon the shares of Reading Company during the fiscal year ended December 31, 1925, from the earnings of the Company for the fiscal year ended December 31, 1924:

Date Declared	Payable First Pref. Stock \$28,000,000	Stock of Record	%	Amount of Dividend
January 14, 1925.	March 12, 1925.	February 20, 1925.	1	\$280,000
April 15, 1925.	June 11, 1925.	May 25, 1925.	1	280,000
June 11, 1925.	September 10, 1925.	August 24, 1925.	1	280,000
October 21, 1925.	December 10, 1925.	November 24, 1925.	1	280,000
			4	\$1,120,000
	Second Pref. Stock \$42,000,000			
December 12, 1924.	January 8, 1925.	December 23, 1924.	1	\$420,000
February 26, 1925.	April 9, 1925.	March 23, 1925.	1	420,000
May 20, 1925.	July 9, 1925.	June 22, 1925.	1	420,000
June 11, 1925.	October 8, 1925.	September 22, 1925.	1	420,000
			4	\$1,680,000
	Common Stock \$70,000,000			
December 12, 1924.	February 12, 1925.	January 15, 1925.	2	\$1,400,000
March 18, 1925.	May 14, 1925.	April 16, 1925.	2	1,400,000
June 11, 1925.	August 13, 1925.	July 20, 1925.	2	1,400,000
September 16, 1925.	November 12, 1925.	October 15, 1925.	2	1,400,000
			8	\$5,600,000

Before declaring the quarterly dividend of 2% upon the Common Stock, payable February 11, 1926, the Board, pursuant to the terms of the issue of the First Preferred and Second Preferred shares, made provision for dividends payable during the year 1926 from the earnings of the fiscal year ended December 31, 1925, as follows:

On the First Preferred Stock the sum of \$1,120,000 was appropriated for the payment of quarterly dividends of 1% each upon that Stock, as follows:

March 11, 1926; June 10, 1926; September 9, 1926, and December 9, 1926.

On the Second Preferred Stock, a quarterly dividend of 1% was declared payable January 14, 1926, and the sum of \$1,260,000 was set apart to make provision for the following additional quarterly dividends of 1% each upon that Stock:

April 8, 1926; July 8, 1926, and October 14, 1926.

#### General Mortgage of Reading Company and the Philadelphia and Reading Coal and Iron Company

During the year 1925 the outstanding joint General Mortgage 4% bonds of Reading Company and The Philadelphia & Reading Coal & Iron Company, dated January 5, 1897, were reduced to \$598,000 through exchanges for the new separate bonds of the two Companies in accordance with the Plan of Segregation.

#### Mortgage Bonds

Changes have occurred in the funded obligations of the Company during the year 1925 as follows:

Mortgage and Collateral Trust Bonds outstanding, December 31, 1924 .....	\$115,056,160.99
General and Refunding Mortgage 4½% bonds issued account similar amount of General Mortgage 4's surrendered .....	\$778,666.66
Real Estate Mortgages and Ground Rents existing on properties purchased during year .....	546.66
	779,213.32
	\$115,835,374.31
Philadelphia, Harrisburg and Pittsburgh Railroad First Mortgage Bonds matured .....	\$515,000.00
Bonds of Reading Company purchased and placed in Treasury .....	299,666.67
Reading Company's proportion of joint General Mortgage 4% bonds of Reading Company and The Philadelphia & Reading Coal & Iron Company, dated January 5, 1897, surrendered for exchange under the Plan of Segregation .....	778,666.66
	1,593,333.33
On December 31, 1925, Bonds outstanding were .....	\$114,242,040.98

The \$1,000,000 First Mortgage 4% Bonds and \$1,000,000 Second Mortgage 6% Bonds of the Shamokin, Sunbury and Lewisburg Railroad Company matured July 1, 1925. Under Finance Docket

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No. 4895, the Interstate Commerce Commission authorized the extension of the First Mortgage Bonds at the present rate of 4% per annum to July 1, 1975, and of the Second Mortgage Bonds, with interest reduced from 6% to 5% per annum, to July 1, 1945. All of the outstanding First Mortgage Bonds were acquired by Reading Company and placed in its treasury.

The \$2,000,000 First Mortgage Bonds of The Philadelphia, Harrisburg and Pittsburgh Railroad Company matured October 15, 1925. The outstanding bonds were paid by Reading Company.

#### The Ironton Railroad Company

The Ironton Railroad Company having been acquired by Reading Company and the Lehigh Valley Railroad Company in 1924, an arrangement was made for the joint operation of the railroad of that Company by Reading Company and the Lehigh Valley Railroad Company.

The necessary authority was secured from the Public Service Commission of Pennsylvania through its Order No. A12625-1925, dated June 2, 1925, and Order of the Interstate Commerce Commission through its Finance Docket No. 4696, dated September 12, 1925.

#### Reading Transportation Company

The increasing number of motor coach or bus routes operating in the territory served by the Reading System has made serious inroads in the passenger earnings on several of the branch rail lines of the System. The Company has not been indifferent to this condition and has recognized the necessity of providing a means for retaining the patronage it now enjoys and of regaining some of that which it has lost through the operation of these routes. The most practicable solution of the problem appeared to

be a co-ordinated system of motor coach and rail service whereby convenient connection could be made at points on the rail lines with the coaches.

To accomplish this purpose, application has been made to the Secretary of the Commonwealth of Pennsylvania for a charter for a new corporation to be known as the Reading Transportation Company, whose entire capital stock will be acquired by Reading Company.

Applications have also been made to the Public Service Commission of Pennsylvania for Certificates of Public Convenience and Necessity for the operation of motor coach lines over several routes paralleling in each instance the rail lines of this Company.

Additional applications will be made from time to time as new routes may be developed.

#### Sesqui-Centennial Exhibition

The 150th anniversary of the signing of the Declaration of Independence will be commemorated through a Sesqui-Centennial Exhibition to be held in Philadelphia during the summer of 1926.

The Sesqui-Centennial Exhibition Association has arranged to issue \$3,000,000 of Participation Certificates to defray certain expenses connected with the Exhibition.

Organizations prominent in the transportation and industrial life of Philadelphia have subscribed for these Certificates, the subscription of Reading Company being for \$50,000.

#### Pension System

Statement of operation of Pension System of Reading Company and subsidiary companies for year ended December 31, 1925.

	Pensioned During 1925				Died During 1925				Number of Pensioners December 31, 1925				Payments During Year
	A	B	C	Total	A	B	C	Total	A	B	C	Total	
Reading Company	83	19	10	112	46	26	3	75	524	114	40	678	\$348,938.90
Atlantic City R. R. Co.	4	2	2	8	..	..	1	1	22	4	3	29	11,147.16
Catasauqua and Fogelsville R. R. Co.	..	..	..	..	..	..	..	..	1	..	..	1	428.16
Delaware River Ferry Co. of N. J.	2	..	1	3	..	..	..	..	7	..	1	8	3,454.82
Gettysburg and Harrisburg Ry. Co.	..	..	..	..	..	..	..	..	1	..	..	1	290.40
North East Pennsylvania R. R. Co.	..	..	..	..	..	..	..	..	1	..	..	1	345.24
Peoples Railway Company	1	..	..	1	..	..	..	..	2	..	..	2	628.35
Perkiomen Railroad Co.	1	1	..	2	..	..	..	..	5	1	..	6	2,558.94
Phila. and Chester Valley R. R. Co.	..	..	..	..	..	..	..	..	2	1	1	4	2,229.00
Phila., Newtown and New York R. R. Co.	1	..	..	1	..	..	..	..	2	..	..	2	422.40
Phila., Reading & Pottsville Tel. Co.	..	..	..	..	..	..	..	..	2	..	..	2	1,208.88
Port Reading R. R. Co.	..	..	..	..	..	..	..	..	3	..	..	3	1,749.24
Reading and Columbia R. R. Co.	1	1	1	3	1	..	..	1	7	2	1	10	3,883.75
Schuylkill Navigation Co.	3	..	..	3	3	..	..	3	10	1	..	11	4,703.52
Stony Creek R. R. Co.	1	..	..	1	..	..	..	..	4	..	..	4	1,212.53
Total	97	23	14	134	50	26	4	80	593	123	46	762	\$383,201.29

Class "A"—70 years of age, 30 or more years continuous service.  
 Class "B"—65-69 years of age, incapacity after 30 or more years continuous service.  
 Class "C"—Irrespective of age and length of service, a/c incapacity resulting from injuries, etc., while in performance of duty.

#### New Rails and Cross Ties Used in Renewals Year Ended December 31, 1925

	130 Lb. Rails		100 Lb. Rails		Cross Ties
	Tons	Miles	Tons	Miles	
Harrisburg Division	2,924.66	14.31	31.37	.20	79,535
New York Division	12,406.15	60.73	549.22	3.50	94,376
Philadelphia Division	..	..	1,916.13	12.20	44,464
Reading Division	10,281.40	50.33	1,703.58	10.84	210,829
Shamokin Division	1,088.68	5.33	2,265.35	14.41	126,363
Wilmington and Columbia Division	..	..	..	..	32,699
Total	26,700.89	130.70	6,465.65	41.15	588,266

Reading Company's program for 1926 calls for extensive rail replacements. Contracts were accordingly awarded before the close of the year for 2500 tons of 100 lb. rails and 27,500 tons of 130 lb. rails on account of 1926 requirements.

Reading Company is using in small quantities a special type of rail weighing 159 lbs. to the yard, which is designed especially for use in city streets where the roadway surface is paved.

#### The Railroad Dollar

The following table illustrates in cents the proportionate amount of each dollar received account of the various classes of service performed by Reading Company during the year 1925, and the manner in which such dollar was expended:

	RECEIPTS	
	CENTS	
Transportation of coal, merchandise; demurrage, etc.	78.29	
Transportation of passengers, milk, excess baggage; dining and Buffet service	10.70	
Transportation of mail	.43	
Transportation of express	1.63	
Switching service	.61	
Rent of equipment and property, joint facilities, etc.	3.56	
Income from corporate investments	4.23	
Miscellaneous	.55	
Total	100.00	

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#### EXPENDITURES

	CENTS
Wages	40.70
Materials	13.43
Fuel	7.39
Depreciation and retirements	5.96
Loss, damage and casualties	1.03
Taxes	4.55
Rent of equipment, leased roads, joint facilities, etc.	3.52
Interest on funded and unfunded debt	5.19
Miscellaneous	.93
Dividends on capital stock	8.46
Balance available for betterments, etc.	8.84
Total	100.00

#### Insurance Fund

##### STATEMENT OF THE INSURANCE FUND FOR THE YEAR ENDED DECEMBER 31, 1925.

Cash on hand December 31, 1924..... \$14,942.59

##### RECEIPTS

Contribution to fund.....\$120,000.00  
 Amount collected from insurance companies a/c fire losses..... 79,044.68  
 Interest income from bank deposits..... 456.01  
 Interest and dividends from securities in fund.... 45,787.50  
 \$260,230.78

##### DISBURSEMENTS

Amount paid for fire and marine losses.....\$149,862.03  
 Amount paid for reinsurance..... 62,205.90  
 \$212,067.93

Cash on hand December 31, 1925..... \$48,162.85

ASSETS  
 Cash.....\$ 48,162.85  
 Securities Owned..... 1,017,690.75  
 \$1,065,853.60

##### LIABILITIES

Balance Reserve, December 31, 1925.....\$1,023,010.13  
 Claims for which Vouchers were drawn but unpaid at the close of the year.... 42,843.47  
 \$1,065,853.60

## SECURITIES OWNED

SECURITIES OF OTHER COMPANIES	Par Value	Book Value
Cambria Iron Company, 1,000 shares.....	\$ 50,000.00	\$ 46,790.25
The Central Railroad Company of New Jersey, 300 shares.....	30,000.00	52,387.50
The Gettysburg and Harrisburg Railway Company, First Consolidated Mortgage 5% bonds	40,000.00	40,000.00
The North Pennsylvania Railroad Company, Funding Loan 4% bonds.....	73,000.00	73,912.50
The Philadelphia Rapid Transit Company, Collateral Trust 5% bonds.....	120,000.00	123,300.00
Reading and Columbia Railroad Company, First Consolidated Mortgage 4% bonds.....	75,000.00	75,000.00
The Washington and Franklin Railway Company, First Mortgage 5% bonds.....	160,000.00	164,800.00
Mortgages on Real Estate.....	31,500.00	31,500.50
Totals of securities of other companies.....	\$579,500.00	\$607,690.75
COMPANY'S OWN SECURITIES		
Reading Company-Jersey Central Collateral Trust 4% Bonds.....	410,000.00	410,000.00
Grand Totals.....	\$989,500.00	\$1,017,690.75

## Guarantees By Reading Company

Reading Company has heretofore guaranteed by endorsement the payment of the principal of and the interest on the following obligations:		
ATLANTIC CITY RAILROAD COMPANY		
First Mortgage 5% Bonds, due May 1, 1929.....	\$2,200,000	
First Consolidated Mortgage 4% Gold Bonds, due July 1, 1951.....	1,851,000	
Camden Terminal Purchase Money Mortgage 5% Gold Bonds, due June 1, 1954.....	3,200,000	\$7,251,000
THE NORTH EAST PENNSYLVANIA RAILROAD COMPANY		
First Mortgage 5% Bonds, due April 1, 1930.....		400,000
THE PHILADELPHIA AND CHESTER VALLEY RAILROAD COMPANY		
First Mortgage 4% Gold Bonds, due April 1, 1938, Preferred.....	280,500	
First Mortgage 3% Gold Bonds, due April 1, 1938, Not Preferred.....	100,000	380,500

THE PHILADELPHIA, NEWTOWN AND NEW YORK RAILROAD COMPANY	
3% Mortgage Bonds, due October 1, 1942.....	507,000
READING AND COLUMBIA RAILROAD COMPANY	
First Consolidated Mortgage 4% Bonds, due March 1, 1962.....	850,000
STONY CREEK RAILROAD COMPANY	
First Mortgage 4% Bonds, due October 1, 1957.....	350,000
The Williams Valley Railroad Company, First Mortgage 4% Bonds, due December 1, 1938.....	120,000
THE WILMINGTON AND NORTHERN RAILROAD COMPANY	
General Mortgage 5% Bonds, due August 1, 1932.....	462,000
	\$10,320,500

Obligations of the following companies, which were merged with Reading Company on December 31, 1923, also bear the guarantee of Reading Company as to the payment of principal and interest:

NEW YORK SHORT LINE RAILROAD	
First Mortgage 4% Gold Bonds, due February 1, 1957.....	\$1,500,000
NORRISTOWN AND MAIN LINE CONNECTING RAILROAD COMPANY	
First Mortgage 4% Gold Bonds, due September 1, 1952.....	250,000
THE PHILADELPHIA AND FRANKFORD RAILROAD COMPANY	
First Mortgage 4½% Bonds, due August 1, 1952.....	500,000
PHILADELPHIA AND READING RAILROAD COMPANY	
(Secured upon property of The Philadelphia and Reading Railroad Company)	
First Series Consolidated Mortgage 4% Bonds, due March 1, 1937.....	\$5,766,500
Improvement Mortgage 4% Bonds, due April 1, 1947.....	9,328,000
	15,094,500
READING BELT RAILROAD	
First Mortgage 4% Gold Bonds, due September 1, 1950.....	750,000
THE SCHUYLKILL AND LEHIGH RAILROAD COMPANY	
First Mortgage 4% Gold Bonds, due May 1, 1948.....	600,000
SHAMOKIN, SUNBURY AND LEWISBURG RAILROAD COMPANY	
First Mortgage 4% Bonds, due July 1, 1975.....	1,000,000
Total.....	\$19,694,500

## Income Statement for the Year Ended December 31, 1925, Compared with the Year 1924

	1925	1924
RAILWAY OPERATING INCOME:		
Freight—Coal.....	\$34,914,501.07	\$36,056,193.35
Freight—Merchandise.....	41,668,494.79	40,860,078.35
Passenger.....	9,881,422.22	10,187,574.35
Excess Baggage.....	17,196.02	19,061.79
Parlor and Chair Car.....	5,254.67	5,418.63
Mail.....	431,330.75	438,441.10
Express.....	1,617,531.15	1,422,449.12
Other Passenger Train.....	179,736.63	162,502.24
Milk.....	401,193.63	433,543.44
Switching.....	601,168.83	509,574.28
Special Service.....	9,617.08	14,085.85
All Other Transportation.....	737,264.63	937,848.49
Incidental.....	1,031,667.90	1,041,487.40
	\$91,496,379.37	\$92,088,258.39
RAILWAY OPERATING EXPENSES:		
Maintenance of Way and Structures.....	\$12,055,882.30	\$11,289,009.78
Maintenance of Equipment.....	20,381,953.68	21,798,358.87
Traffic.....	862,643.81	840,986.54
Transportation.....	33,152,857.26	34,030,945.46
Miscellaneous Operations.....	165,846.90	137,606.53
General Expenses.....	2,236,259.41	2,261,209.48
Transportation for Investment.....	221,927.78	51,560.43
	68,633,515.58	70,306,556.23
Net Revenue from Railway Operations.....	\$22,862,863.79	\$21,781,702.16
Railway Tax Accruals.....	\$ 4,349,772.14	\$ 4,284,017.70
Uncollectible Railway Revenues.....	5,611.86	6,010.17
TOTAL OPERATING INCOME.....	\$18,507,479.79	\$17,491,674.29
NON-OPERATING INCOME:		
Hire of Freight Cars—Net.....	\$ 1,537,333.59	\$ 1,169,012.15
Other Equipment Rents—Net.....	256,083.49	219,057.65
Joint Facility Rents—Net.....	53,732.32	87,997.18
	1,847,149.40	1,476,066.98
NET RAILWAY-OPERATING INCOME:	\$20,354,629.19	\$18,967,741.27
OTHER NON-OPERATING INCOME:		
Miscellaneous Rent Income.....	\$ 578,222.05	\$ 526,350.68
Miscellaneous Non-operating Physical Property.....	307,567.07	251,869.12
Dividend Income.....	2,760,347.06	2,590,434.23
Income from Funded Securities.....	829,818.19	818,879.97
Income from Unfunded Securities and Accounts.....	567,532.41	433,078.93
Income from Sinking and other Reserve Funds.....	29,843.51	34,731.17
Release of Premiums on Funded Debt.....	5,202.96	5,202.96
Miscellaneous Income.....	7,467.90	8,228.50
Separately Operated Properties—Profit.....	134,322.50	
	5,220,323.65	4,668,775.56
GROSS INCOME.....	\$25,574,952.84	\$23,636,516.83
DEDUCTIONS FROM GROSS INCOME:		
Rent for Leased Roads.....	\$ 2,829,443.18	\$ 2,831,655.94
Miscellaneous Rents.....	1,968.03	2,840.24
Miscellaneous Tax Accruals.....	168,568.44	115,201.76
Interest on Funded Debt.....	5,085,742.59	5,213,930.04
Interest on Unfunded Debt.....	41,999.61	28,232.60
Amortization of Discount on Funded Debt.....	27,007.44	27,007.44
Miscellaneous Income Charges.....	260,604.56	296,332.66
NET INCOME.....	\$17,159,618.99	\$15,121,316.15
DISPOSITION OF NET INCOME:		
Income Applied to Sinking and Other Reserve Funds.....	\$ 46,243.51	\$ 47,031.17
Income Appropriated for Investment in Physical Property:		
Additions and Betterments.....	4,090,291.59	3,577,343.23
INCOME BALANCE TRANSFERRED TO PROFIT AND LOSS.....	\$13,023,083.89	\$11,496,941.75

[ADVERTISEMENT]



### Philadelphia and Reading Relief Association

Reading Company's contribution in 1925 to the Philadelphia and Reading Relief Association, whose membership is composed of employees of Reading Company and subsidiary companies, was \$59,202.74.

Through a change in the regulations of the Association, effective January 1, 1925, disablement benefits were increased approximately 20%, while the rates of contributions for benefits remained unchanged.

### Employees' Magazine

During the year 1925 Reading Company began the publication of an employees' monthly magazine—the "Reading Railroad Magazine." The magazine contains no advertisements and is designed to promote helpfulness and co-operation between the Company and its employees in the various departments.

Its pages contain news of general interest to all connected with the organization, such as construction projects, operating news, departmental notes, and photographs of timely interest. The first number was issued in September, 1925.

Free distribution of a copy of each issue of the magazine is made to each employee of the Company.

The Board hereby expresses its appreciation of the services

rendered by the officers and employees of the Company during the past year.

By order of the Board of Directors,

AGNEW T. DICE,  
President.

### Profit and Loss Account for Year Ended December 31, 1925

	Dr.	Cr.
Balance December 31, 1924 .....		\$13,592,507.81
Credit Balance Transferred from Income ...		13,023,083.89
Donations .....		23,871.78
Profit on Road and Equipment Sold .....		682.33
Unrefundable Overcharges .....		11,848.33
Miscellaneous Credits .....		48,388.49
Dividend on First Preferred Stock .....	\$1,119,648.00	
Dividend on Second Preferred Stock .....	1,678,826.00	
Dividend on Common Stock .....	5,599,128.00	
Debt Discount Extinguished through Surplus .....	9,316.60	
Surplus Appropriated for Investment in		
Physical Property .....	8,411,158.86	
Loss on Retired Road and Equipment .....	585,127.06	
Miscellaneous Debits .....	1,264,499.58	
Balance December 31, 1925 .....	8,032,678.53	
	\$26,700,382.63	\$26,700,382.63

### General Balance Sheet December 31, 1925

ASSETS		LIABILITIES	
INVESTMENTS	December 31, 1925	STOCK	December 31, 1925
Investment in road and equipment.....	\$276,960,426.98	First Deferred... \$28,000,000.00	\$8,800.00
Improvements on leased railway property..	22,426,369.01	Second Preferred 42,000,000.00	29,350.00
Deposits in lieu of mortgaged property sold .....	\$3,009,498.96	Common .....	70,000,000.00
Less Company's securities..	2,169,600.00		10,900.00
Miscellaneous Physical Property .....	14,248,443.67		
	\$314,475,138.62		\$139,950,950.00
INVESTMENTS IN AFFILIATED COMPANIES:		LONG-TERM DEBT	
Stocks .....	\$21,380,592.43	Funded Debt secured by Mortgage ..	\$162,086,040.98
Bonds .....	10,368,237.01	Funded Debt secured by Stock Collateral ....	24,295,000.00
Advances .....	6,549,662.32	Equipment Trust Obligations ..	26,445,000.00
	\$38,298,491.76		\$212,826,040.98
OTHER INVESTMENTS		Non-negotiable debt to affiliated companies.	325,725.28
Stocks .....	\$27,298,493.56		
Bonds .....	11,269,904.51		
Notes .....	7,182.00		
Advances .....	101,231.20		
Miscellaneous .....	174,750.00		
	\$38,851,561.27		
Total Investments .....	\$391,625,191.65		
CURRENT ASSETS		CURRENT LIABILITIES	
Cash .....	\$4,962,234.65	Traffic and car-service balances payable ...	\$3,908,314.12
Special deposits .....	34,071.18	Audited accounts and wages payable .....	5,073,095.77
Loans and bills receivable .....	278,062.00	Miscellaneous accounts payable .....	355,558.36
Traffic and car-service balances receivable .	1,985,203.60	Interest matured unpaid .....	1,420,369.51
Net balance receivable from agents and conductors .....	1,792,111.61	Dividends matured unpaid .....	146.00
Miscellaneous accounts receivable .....	2,071,569.39	Funded debt matured unpaid .....	57,888.90
Materials and supplies .....	9,447,862.27	Unmatured dividends declared .....	1,819,488.50
Interest and dividends receivable .....	1,146,033.93	Unmatured interest accrued .....	897,113.12
Rents receivable .....	33,337.17	Unmatured rents accrued .....	264,534.23
Other current assets .....	23,083.29	Other current liabilities .....	148,494.14
	\$21,773,569.09		
Total Current Assets .....	\$417,644,916.86		
DEFERRED ASSETS		DEFERRED LIABILITIES	
Working fund advances .....	\$41,718.23	Other deferred liabilities .....	247,396.37
Insurance and other funds .....	\$1,065,853.60		
Less Company's securities ..	410,000.00	UNADJUSTED CREDITS	
Other deferred assets .....	4,076.34	Tax liability .....	\$5,077,903.54
	\$701,648.17	Premium on funded debt .....	24,280.69
Total Deferred Assets .....	\$34,834.65	Insurance and casualty reserves .....	1,023,010.13
UNADJUSTED DEBITS		Accrued depreciation—road .....	2,423,609.70
Rents and insurance premiums paid in advance .....	\$169.65	Accrued depreciation—equipment .....	38,088,060.03
Discount on funded debt .....	175,597.35	Other unadjusted credits .....	344,573.15
Other unadjusted debits .....	3,368,740.95		
Securities issued or assumed—unpledged .....	\$20,621,116.67		
Securities issued or assumed—pledged .....	65,665,333.33		
	\$3,544,507.95		
Grand Total .....	\$417,644,916.86		

[ADVERTISEMENT]

# Thirty-First Annual Report of Central of Georgia Railway Company

Year Ended December 31, 1925  
Savannah, Georgia, 1926

## Report of the Board of Directors

Savannah, Georgia, March 10, 1926.

To the Stockholders:

The Board of Directors herewith submits the following report for the year ended December 31, 1925:

### Income

Details are shown in Table 2.

### Transportation Operations

Details are shown in Table 2.

### Railway Operating Revenues

"Railway Operating Revenues" increased \$3,056,199.03 (11.25%). "Freight Revenue" increased \$2,076,970.85 (10.72%). The tons of revenue freight carried one mile were 1,859,289,383, an increase of 227,332,223 ton miles (13.93%). The average revenue per ton was \$2.12 as compared with \$2.18 for the previous year, and the average revenue per ton mile was 1.15 cents as compared with 1.19 cents for the previous year.

"Passenger Revenue" increased \$721,085.84 (13.41%). Revenue passengers carried one mile were 192,483,869, an increase of 21,692,294 (12.70%). Average revenue per passenger per mile was 3.17 cents as compared with 3.15 cents for the previous year.

"Mail Revenue" decreased \$18,450.57 (3.69%).

"Express Revenue" increased \$155,496.14 (20.17%).

"Other Passenger Train," "Other Transportation," "Incidental" and "Joint Facility" revenues, increased \$121,096.77 (10.55%).

### Railway Operating Expenses

"Railway Operating Expenses" increased \$1,666,430.85 (7.91%).

The increase of \$462,092.23 (11.00%) in "Maintenance of Way and Structures" was due mainly to retirements and expenses in connection with grade and line revision on Birmingham District; improvements at Fort Valley, Columbus and Albany, Georgia; extraordinary repairs due to January floods; charges in connection with rebuilding Atlanta Terminal train sheds; unusually heavy repairs to docks and wharves at Savannah, Georgia; increased maintenance due to increase in traffic; and increase in wages of common labor.

The increase of \$324,437.65 (6.67%) in "Maintenance of Equipment" was due to increase in force on account of increased business and increase in rates of pay.

Charges to "Maintenance of Equipment" for depreciation were \$726,823.46, an increase of \$3,311.78 (.046%). The average miles per serviceable locomotive were 35,582, an increase of 1,969 miles (5.86%). The average age of locomotives was 18.5 years, as compared with 18.6 for previous year.

"Traffic" expenses increased \$52,213.11 (6.34%).

"Transportation" expenses increased \$822,229.55 (8.10%) due to increase in business handled and increase in wages.

"Miscellaneous Operations" increased \$54,097.21 (38.65%) due to the increase in number of through passenger trains run.

"General Expenses" increased \$40,892.00 (3.82%).

"Transportation for Investment—Credit" increased \$89,530.90 (50.05%) due to transportation in connection with Birmingham grade revision and ballasting Savannah District.

### Railway Tax Accruals

"Railway Tax Accruals" were \$1,339,921.16 as compared with \$1,344,503.44 last year, a decrease of \$4,582.28 (0.34%).

### Uncollectible Railway Revenues

"Uncollectible Railway Revenues" amounted to \$9,363.31 as compared with \$20,542.48 last year, a decrease of \$11,179.17 (54.42%).

### Equipment Rents—Net Debit

The increase of \$453,204.45 (351.74%) in net rental paid for use of equipment is due chiefly to increase in traffic which necessitated the use of more cars and increase in tonnage of those commodities which require a higher percentage of empty movement.

### Joint Facility Rents—Net Debit

"Joint Facility Rents—Net Debit" increased \$40,383.74 (76.98%), due chiefly to credit in 1924 covering adjustment of Southern Railway Company's proportion of rental for facilities at Savannah, and to additional charge made in accounts for 1925 in anticipation of new contract with Western Railway of Alabama covering use of joint facilities at Montgomery.

### Non-Operating Income

The increase of \$84,043.80 (8.10%) in "Non-Operating Income" is due mainly to the following increases:

Dividend from Atlantic Compress Company .....\$ 30,500.00

Dividends from Atlanta and West Point Railroad Company and The Western Railway of Alabama.....	16,885.00
Dividend from Fruit Growers Express Company.....	12,540.00
Interest during construction.....	97,448.00
Offset in part by decrease in interest from special and other deposits .....	81,944.00

### Deductions From Gross Income

The increase of \$127,165.72 (3.79%) in "Deductions from Gross Income" is due mainly to the following increases:

Interest on funded debt.....	\$109,240.00
Expenses of operation of Tybrisa.....	16,163.00

### Financial

The Balance Sheet, Table 4, reflects the general financial condition of your company at December 31, 1925, as compared with the previous year.

### Capital Stock and Funded Debt

#### Capital Stock:

There were no changes in capital stock.

#### Funded Debt:

\$100,000 certificates of Equipment Trust "L" (final payment); \$66,000 certificates of Equipment Trust "N"; \$194,000 certificates of Equipment Trust "O"; and \$63,663.30 note of Equipment Trust "I" matured and were retired.

\$30,000 of Upper Cahaba Branch First Mortgage Bonds and \$30,000 Greenville and Newnan Main Line First Mortgage Bonds matured and were paid. These were the final payments on both issues.

Central of Georgia Equipment Trust "P" for \$1,410,000 was issued March 1, 1925, for approximately 75% of the cost of 10 Mikado type locomotives, 500 ventilated box cars, 100 flat cars, 5 all-steel passenger coaches and one baggage and mail car; all of which were received and put in service during the year. The certificates mature in 15 equal annual instalments, March 1, 1926 to 1940, with interest at 4½% per annum, payable semi-annually.

Central of Georgia Equipment Trust "Q" for \$3,840,000 was issued November 1, 1925, for approximately 75% of the cost of 10 central type locomotives, 5 mountain type locomotives and 1,927 ventilated box cars; of which 3 central type locomotives had been received at the close of the year. The certificates mature in 15 equal annual instalments, November 1, 1926-1940, with interest at 4½% per annum, payable semi-annually.

#### Other Indebtedness:

Non-negotiable debt to affiliated companies increased \$249,920, increasing the amount to \$750,000. The company has no floating debt.

#### Dividends:

During the year dividends Nos. 22 and 23 (total \$1,200,000) at the rate of six per cent per annum were declared and paid.

### Physical Changes

The following is a summary of the more important improvements during the year, the cost of which was wholly or in part charged to "Road and Equipment."

#### Additions and Betterments—Road:

60.8411 miles of main track were relaid with new ninety pound steel rail; 42.7435 miles were relaid with new eighty pound steel rail. Of the new rail 23.2517 miles replaced rail of the same weight and 80.3329 miles replaced rail of lighter weight. 36.4681 miles of track were relaid with second-hand steel rail, replacing rail of lighter weight. 8.1673 miles of track were relaid with second-hand steel rail, replacing rail of the same weight. Total mileage of track relaid with new and second-hand steel rail was 148.2200.

Fifty-two new industrial tracks aggregating 5.0926 miles were added, while twenty-two industrial tracks aggregating 1.6657 miles were removed; a net increase of thirty industrial tracks and a net increase of 3.4269 miles.

Fifty-six new company sidings aggregating 12.2708 miles were added, while eleven company sidings aggregating 2.6379 miles were removed; a net increase of forty-five company tracks and a net increase of 9.6329 miles.

128.26 miles of ballasted track were repaired or renewed to restore the track to its original standard. 74.85 miles of unballasted track were ballasted.

4,468.7 lineal feet of pile and timber trestles were replaced by permanent culverts and embankment, and 3,324 lineal feet of un-



treated pile and timber trestles were rebuilt in creosoted material to conform to standard.

1,814 lineal feet of cast iron and reinforced concrete pipe and reinforced concrete boxes were installed to provide waterways for trestles filled, and 2,571 lineal feet of cast iron and reinforced concrete pipe and reinforced concrete boxes were installed to replace crushed terra cotta pipes and wooden box drains.

540,665 cross ties were renewed, being equivalent to 187.73 miles of continuous track, or 7.63 per cent of all ties in track, including sidings.

At Columbus, Georgia, .72 miles of new second main track were constructed and .75 miles of side track converted to second main track, a total of 1.47 miles, making the second main track extend from Muscogee Junction to Chattahoochee River, a total distance of 3.27 miles.

Three 150 ton, 50 foot platform, four section track scales were

installed, one each at Millen, Gordon and Cuthbert, Georgia, replacing at Cuthbert a scale of lighter capacity.

416.1 miles of new telephone lines were constructed, representing 894.4 miles of copper wire.

Five highway crossing signal bells of the flash light type were installed for the protection of dangerous grade crossings, one each at Tennille, Georgia, East Point, Georgia, M. P. 201 plus 1,806 feet Atlanta District, M. P. 250 plus 3,230 feet and M. P. 294 plus 1,510 feet Albany District.

Work on enlarging and increasing the capacity of the water filtration plant at Macon shops was completed.

A concrete dam and by-pass were constructed at Industry, Georgia, to prevent silt from entering storage reservoir in time of freshets.

A 50,000 gallon high service water tank of creosoted material with ten inch pen stock was erected at east end of train yard at Macon, Georgia.

A 150,000 gallon reinforced concrete water tank was erected at Americus, Georgia, replacing a 50,000 gallon cypress tank.

A 50,000 gallon low service creosoted water tank with ten inch pen stock was erected near Tenth Street, Columbus, Georgia.

A low service water tank with eight inch pen stock was converted into a high service tank with ten inch pen stock at Opelika, Alabama.

A 6,800 gallon creosoted box water tank was erected at Cenchat, Georgia, and 4,000 lineal feet of three inch wrought iron pipe laid to connect a gravity supply.

A 300 ton storage reinforced concrete coaling station with weigh hoppers, 50 ton dry sand storage and 7,500 ton ground storage was erected at Millen, Georgia.

A 100 ton storage reinforced concrete coaling station with weigh hoppers was erected at Union Springs, Alabama.

At Little River, A-213.6, Covington District, a new bridge was completed consisting of two steel deck truss spans and one deck plate girder span released from Okmulgee River Bridge, Macon, supported on three new concrete piers and one new concrete abut-

## CENTRAL OF GEORGIA RAILWAY COMPANY

## INCOME STATEMENT

Year Ended December 31.

	1925	Percent of Total Operating Revenues	1924	Percent of Total Operating Revenues	+ Increase — Decrease
Average miles operated	1,920.38		1,920.64		.26
Railway Operating Revenues:					
I. Transportation—Rail Line:					
101. Freight	\$21,452,533.16	70.97	\$19,375,562.31	71.31	+\$2,076,970.85
102. Passenger	6,099,378.39	20.18	5,378,292.55	19.79	+ 721,085.84
103. Excess baggage	39,289.85	.13	38,202.89	.14	+ 1,086.96
104. Sleeping car	39,404.05	.13	142,505.18	.52	- 103,101.13
105. Parlor and chair car	2,692.32	.01	12,652.89	.05	- 9,960.57
106. Mail	482,096.17	1.59	500,546.74	1.84	- 18,450.57
107. Express	926,496.14	3.07	771,000.00	2.84	+ 155,496.14
108. Other passenger train	23,300.18	.08	15,626.00	.06	+ 7,674.18
109. Milk	16,319.44	.05	17,373.49	.06	- 1,054.05
110. Switching	345,512.70	1.14	315,420.77	1.16	+ 30,091.93
111. Special service train	24,811.25	.08	28,458.26	.10	- 3,647.01
Total	29,451,833.65	97.43	26,595,641.08	97.87	+ 2,856,192.57
112. Incidental:					
131. Dining and buffet	160,628.64	.53	110,756.77	.41	+ 49,871.87
132. Hotel and restaurant	4,752.55	.02	4,434.60	.02	+ 317.95
133. Station train and boat privileges	27,889.36	.09	23,888.82	.09	+ 4,000.54
134. Parcel room	85.20	...	91.80	...	- 6.60
135. Storage—Freight	96,840.43	.32	69,368.02	.25	+ 27,472.41
136. Storage—Baggage	1,098.80	...	1,228.87	...	- 130.07
137. Demurrage	95,122.37	.32	84,892.20	.31	+ 10,230.17
141. Power	5,206.09	.02	5,142.74	.02	+ 63.35
142. Rents of buildings and other property	4,398.47	.01	4,226.08	.02	+ 172.39
143. Miscellaneous	327,136.84	1.08	223,650.09	.82	+ 103,486.75
Total	723,158.75	2.39	527,679.99	1.94	+ 195,478.76
IV. Joint Facility:					
151. Joint facility—Cr.	\$55,128.82	.18	\$50,643.16	.19	+ \$4,485.66
152. Joint facility—Dr.	712.81	...	754.85	...	- 42.04
Total	54,416.01	.18	49,888.31	.19	+ 4,527.70
Total railway operating revenues	30,229,408.41		27,173,209.38		+ 3,056,199.03
Railway Operating Expenses:					
201-280. Maintenance of way and structures	\$4,663,221.41	15.43	\$4,201,129.18	15.46	+ \$462,092.23
301-337. Maintenance of equipment	5,191,128.81	17.17	4,866,691.16	17.91	+ 324,437.65
351-359. Traffic	875,499.69	2.90	823,286.58	3.03	+ 52,213.11
371-420. Transportation—Rail line	10,970,861.05	36.29	10,148,631.50	37.35	+ 822,229.55
441-446. Miscellaneous operations	194,060.23	.64	139,963.02	.51	+ 54,097.21
451-462. General	1,111,112.65	3.68	1,070,220.65	3.94	+ 40,892.00
471. Transportation for investment—Cr.	268,402.23	.89	178,871.33	.66	+ 89,530.90
Total railway operating expenses	22,737,481.61	75.22	21,071,050.76	77.54	+ 1,666,430.85
Net revenue from railway operations	7,491,926.80	24.78	6,102,158.62	22.46	+ 1,389,768.18
532. Railway Tax Accruals	\$1,339,921.16	4.43	\$1,344,503.44	4.95	- \$4,582.28
533. Uncollectible Railway Revenues	9,363.31	.03	20,542.48	.08	- 11,179.17
Railway operating income	\$6,142,642.33	20.32	\$4,737,112.70	17.43	+ \$1,405,529.63

Italics indicate credit.

## CENTRAL OF GEORGIA RAILWAY COMPANY

## INCOME STATEMENT

	1925	1924	+ Increase — Decrease
Railway operating income—brought forward	\$6,142,642.33	\$4,737,112.70	+\$1,405,529.63
Additions to Railway Operating Income:			
504. Rent from locomotives	\$82,935.02	\$33,640.75	+ \$49,294.27
505. Rent from passenger-train cars	143,256.22	101,748.87	+ 41,507.35
507. Rent from work equipment	28,896.01	22,290.06	+ 6,605.95
508. Joint facility rent income	106,870.92	140,080.99	- 33,210.07
Total additions to railway operating income	361,958.17	297,760.67	+ 64,197.50
Deductions from Railway Operating Income:			
536. Hire of freight cars—Debit balance	\$621,898.40	\$109,524.53	+ \$512,373.87
537. Rent for locomotives	37,600.48	28,109.29	+ 9,491.19
538. Rent for passenger-train cars	175,216.41	146,905.11	+ 28,311.30
540. Rent for work equipment	2,423.99	1,988.33	+ 435.66
541. Joint facility rents	199,717.23	192,543.56	+ 7,173.67
Total deductions from railway operating income	1,036,856.51	479,070.82	+ 557,785.69
Net railway operating income	5,467,743.99	4,555,802.55	+ 911,941.44
Non-Operating Income:			
502. Revenues from miscellaneous operations	\$34,282.50	\$28,370.89	+ \$5,911.61
509. Income from lease of road	45,299.64	45,299.64	...
510. Miscellaneous rent income	105,767.73	107,218.06	- 1,450.33
511. Miscellaneous non-operating physical property	65,889.16	58,666.06	+ 7,223.10
513. Dividend income	571,408.25	515,833.25	+ 55,575.00
514. Income from funded securities	110,820.80	109,030.51	+ 1,790.29
515. Income from unfunded securities and accounts	188,599.05	173,600.92	+ 14,998.13
519. Miscellaneous income	12.00	16.00	- 4.00
Total non-operating income	1,122,079.13	1,038,035.33	+ 84,043.80
Gross income	6,589,823.12	5,593,837.88	+ 995,985.24
Deductions from Gross Income:			
534. Expenses of miscellaneous operations	\$38,259.98	\$22,096.54	+ \$16,163.44
542. Rent for leased roads	373,360.16	372,959.22	+ 400.94
543. Miscellaneous rents	149,370.21	147,008.23	+ 2,361.98
546-A Interest on funded debt	2,795,480.90	2,686,240.43	+ 109,240.47
546-B Interest on non-negotiable debt to affiliated companies	33,921.84	38,372.53	- 4,450.69
547. Interest on unfunded debt	2,156.21	4,927.04	- 2,770.83
548. Amortization of discount on funded debt	73,716.78	67,861.36	+ 5,855.42
551. Miscellaneous income charges	18,443.66	18,078.67	+ 364.99
Total deductions from gross income	3,484,709.74	3,357,544.02	+ 127,165.72
Net income	\$3,105,113.38	\$2,236,293.86	+ \$868,819.52

[ADVERTISEMENT]

ment, with three panels of new creosoted ballast deck trestle approach at the west end.

At Alcovy River, A-246.9, Covington District, a new bridge was completed consisting of three 50 foot deck plate girder spans supported on concrete piers, with 187 feet open deck creosoted trestle approaches.

Bridges H-196.1 and H-240.8, Albany District, and M-230.0, M-269.6 and M-285.9, Columbus District, were strengthened to carry new central type locomotives, and bridge J-409.2, Florala District, was strengthened to carry 1,700 class engines.

At Columbus, Georgia, viaduct was completed carrying Thirteenth Street over our tracks from Fifth Avenue to Tenth Avenue and closing Twelfth and Thirteenth Streets to all traffic over our tracks. The viaduct is of encased steel and reinforced concrete, 1,890 feet in length, with 40 foot roadway and two 6 foot sidewalks.

At Pea River, J-432.2, Florala District, a new bridge was built consisting of four plate girder spans, supported on five creosoted pile piers, with 130 feet of five pile creosoted ballast deck trestle approaches.

At Savannah, Georgia, a car repair building 32 feet by 309 feet was erected from salvage recovered from a temporary paint shop retired.

At Savannah, Georgia, a new paint shop was completed, replacing structures destroyed by fire in 1923.

At Macon, Georgia, a two-story brick structure with basement was erected on the site of the old union passenger station, making two independent warehouses. Both warehouses have been leased to responsible parties for a period of ten years.

At Opelika, Alabama, a new brick union passenger depot was constructed with platforms and shelter sheds along Central of Georgia and Western Railway of Alabama tracks.

At Columbus, Georgia, a brick yard office and extension to transfer platform were constructed.

Work on Birmingham Grade Revision has progressed. At the close of the year 6,837,000 cubic yards of material had been moved and the total grading about 95% completed. Grading on many of the projects has been completed. There are yet some places where unusual conditions have retarded completion. At the close of the year eighteen and one-half miles of new line were in service, leaving thirty-nine and eight-tenths miles of new track to be completed. Twenty-one and one-half miles of old line had either been raised or lowered, leaving four miles to be raised or lowered.

[ADVERTISEMENT]

(Continued from page 1039)

MAINE CENTRAL			
	1925	1924	Increase or decrease
Average mileage operated.....	1,198.81	1,207.65	—8.84
Railway operating revenues.....	\$20,070,587	\$20,178,336	—\$107,749
Maintenance of way.....	2,966,147	3,251,444	—285,297
Maintenance of equipment.....	3,908,765	3,939,243	—30,478
Transportation.....	7,941,517	8,489,031	—547,514
Total operating expenses.....	15,667,792	16,528,552	—860,760
Operating ratio.....	78.06	81.92	—3.86
Net revenue from operations.....	4,402,796	3,649,785	753,011
Railway tax accruals.....	1,184,180	1,216,287	—32,106
Railway operating income.....	3,218,616	2,433,498	785,118
Equipment rents—net Cr.....	147,334	199,624	—52,290
Joint facility rents—Net Dr.....	259,142	320,491	—61,349
Net railway operating income.....	3,104,329	2,307,681	796,648
Non-operating income.....	256,549	241,256	15,293
Gross income.....	3,360,878	2,548,937	811,941
Rent for leased roads.....	902,121	912,896	10,775
Interest on funded debt.....	1,213,994	1,183,442	30,552
Total deductions from gross income.....	2,183,878	2,159,915	23,963
Net income.....	1,177,000	389,022	787,978
Disposition of net income—			
Current dividends on preferred stock, 1½ per cent in 1924; 5 per cent in 1925.....	150,000	37,500	112,500
Reserve fund for accumulated preferred dividends.....	300,000	300,000	.....
Surplus for year carried to profit and loss.....	\$727,000	\$51,522	.....

PENNSYLVANIA.—1925 EARNINGS.—See article on another page entitled "Pennsylvania's Excellent Report."

POTEAU VALLEY.—Abandonment.—The Interstate Commerce Commission has issued a certificate authorizing this company, which is controlled by the Kansas City Southern through stock ownership, to abandon its railroad, extending from a connection with the Kansas City Southern at Shady Point, Okla., to Calhoun,

#### Additions and Betterments—Equipment:

The following equipment was acquired and placed in service during the year—

Locomotives: Ten mikado type (from proceeds of Equipment Trust "P") and three central type (from proceeds of Equipment Trust "Q") from Baldwin Locomotive Works. Five mountain type (from current cash) from American Locomotive Works. Three 6-wheel switch locomotives were sold, making a net increase of fifteen locomotives, and an increase of 947,413 pounds in tractive power.

Freight Train Cars: Five hundred steel under-frame ventilated box cars and one hundred steel under-frame flat cars (from proceeds of Equipment Trust "P") from Tennessee Coal, Iron and Railroad Company. Ten steel under-frame cabooses built at company shops, Macon, Georgia.

Passenger Train Cars: Three all steel open coaches, one all steel baggage and mail car, and two all steel partition coaches (from proceeds of Equipment Trust "P") from Pullman Car and Manufacturing Corporation. Nine steel and ten wooden sleeping cars and two steel and one wooden parlor cars were sold, and two wooden parlor cars were converted into roadway living cars, thereby disposing of all sleeping and parlor cars owned by your company except one wooden parlor car.

Work Equipment: One American steam ditcher was purchased from current cash. Two roadway cars and one tool car were built at company shops, Macon, Georgia.

#### General

The attached tables exhibit the financial condition of your company and the result of the year's transactions.

On May 1, 1925, your company discontinued the operation of its sleeping and parlor cars, and this service was taken over by The Pullman Company under Illinois Central contract.

With deep sorrow the Directors announce the death on October 2, 1925, of Charles E. James, a director of your company continuously from October 14, 1907. The Board has appropriately recorded its appreciation of his high character and valued service.

The Board of Directors takes this opportunity to express its appreciation of the integrity, efficiency and united efforts displayed by your officers and employees in the discharge of their duties.

By order of the Board of Directors.

CHARLES H. MARKHAM,  
Chairman of the Board.

6.6 miles. The line formerly served coal mines which were closed March 5, 1925.

READING COMPANY.—1925 Earnings.—Annual report for 1925 shows net income after charges of \$17,159,619, equivalent after preferred dividends to \$10.25 a share on the \$50 par value common stock. Net income in 1924 was \$15,121,316 or \$8.80 per share on the common.

ST. LOUIS-SAN FRANCISCO.—New Directors.—H. P. Wright of Kansas City and R. E. Lee Wilson of Wilson, Ark., have been elected directors to succeed Samuel Lazarus and A. G. Becker.

SANDY VALLEY & ELKHORN.—Bonds.—The Interstate Commerce Commission has granted authority for the issuance of \$2,320,000 refunding and general mortgage bonds, to be delivered to the Chesapeake & Ohio in discharge of indebtedness of the Sandy Valley & Elkhorn, which was assigned to the Chesapeake & Ohio when the latter company acquired control of the S. V. & E. in 1925.

SANTA FE NORTH WESTERN.—Operation of Line.—The Interstate Commerce Commission has issued a certificate authorizing this company to take over the operation of the line owned by the White Pine Lumber Company, extending from Deer Creek, N. Mex., to Porter, 6.32 miles, which line has not hitherto been operated as a common carrier. The acquisition will be covered by a lease.

SEABOARD AIR LINE.—Equipment Trust.—The Interstate Commerce Commission has announced a decision to the effect that the record is insufficient to make a finding with respect to the extension of certain equipment trust obligations deposited under the Seaboard Air Line first and consolidated mortgage. The obligations in question have matured and the purpose of extending them is to preserve the lien of the mortgage upon the equipment represented by the matured equipment trust obligations as against the lien of any other mortgage which might otherwise attach and perhaps be equal or superior to the lien of the first and consolidated mortgage. The matured equipment trust obligations are purposed to be stamped with various legends and deposited with the corporate trustee for the purpose of drawing down a certain amount of cash, and this part of the application was held not to be within the pur-



view of section 20a. As a result the application of the carrier was dismissed.

**Tentative Agreement for Control of South Georgia and Georgia Northern.**—J. W. Oglesby, president of the South Georgia, has announced that the Seaboard Air Line has entered into a tentative agreement for the leasing of the South Georgia and the Georgia Northern. The tentative agreement is said to provide for the leasing of the two roads by the Seaboard, subject to purchase. The South Georgia extends from Adel, Ga., to Hampton Springs, Fla., 81.3 miles, and connects with the Seaboard at Greenville. The Georgia Northern extends from Albany, Ga., to Boston, 67.5 miles, connecting with the Columbus-Albany branch of the Seaboard at Albany.

**SUSQUEHANNA & NEW YORK.—Leasing of Tionesta Valley.**—The Interstate Commerce Commission has re-affirmed its decision of October 29, 1924, refusing the Susquehanna & New York permission to lease the Tionesta Valley. Both carriers are owned by the Central Leather Company and serve plants owned by it. The Susquehanna & New York owns a line from Towanda, Pa., to Marsh Hill Junction, 46 miles, and has trackage rights over the Northern Central between the latter and West Williamsport, 21 miles. The Tionesta Valley operates from Sheffield, Pa., to Hallton, with a branch to Clarendon Junction. The two lines do not connect, the nearest connection via the Pennsylvania between Sheffield and West Williamsport being over 100 miles. The commission's refusal is based on the fact that if the two lines were put together the operations and accounts would be so intermingled that it would be difficult to ascertain whether or not the two carriers were granting unlawful preference to the controlling and affiliating industries, and it states, furthermore, that as a general rule it is of the opinion that the union of two such widely separated carriers is undesirable. The commission states, "In our opinion it is highly desirable that, so long as the Tionesta is controlled by an industry which furnished the major portion of its traffic, a separate record should be kept of its operations; and there is here no showing of economies in the public interest which offsets that desirability." It further contends that if the accounts were merged "the actual results from the operation of Tionesta could only be ascertained by special accounting investigation."

Commissioners Woodlock, Cox and Campbell dissented. Commissioner Woodlock said:

"It is plain that the controlling motive in the mind of the applicant in this case is to remove the Tionesta from the operation of the recapture provision of the act by consolidating it with the poorer road. In my judgment such motive is entirely proper. The less money that is 'recaptured' from the railroad industry and irrevocably emptied into the government coffers, the better for everybody. It certainly is 'in the public interest' to prevent 'recapture' wherever it can be done without infringing other provisions of the act. Granted that the direct economies expected by the applicant in the present case are relatively trifling, and granted that the two railroads are 100 miles apart, granted also that both are owned by the Central Leather Company, I believe that the balance clearly tipped in favor of the application. I do not believe that to grant would have introduced much—if any—increased difficulty in policing the accounts, divisions, etc."

### Valuation Reports

The Interstate Commerce Commission has issued final and tentative valuation reports placing the final value for rate-making purposes of the property owned and used for carrier purposes as follows:

Oklahoma, Kansas & Missouri.....	\$299,720	1919
St. Francois County.....	190,190	1914
Sandy River & Rangeley Lakes.....	1,359,427	1916
Cazenovia Southern.....	57,000	1917
Albany Passenger Terminal.....	158,901	1915
Randolph & Cumberland.....	95,581	1918

#### TENTATIVE

Seattle, Port Angeles & Western.....	\$2,523,760	1918
Wichita Falls & Northwestern.....	5,664,924	1918

### Dividends Declared

Atchison, Topeka & Santa Fe.—Common, \$1.75, quarterly, payable June 1 to holders of record April 30.  
Baltimore & Ohio.—Common, 1½ per cent, quarterly; preferred, 1 per cent, quarterly, both payable June 1 to holders of record April 17.

### Average Price of Stocks and Bonds

	April 6	Last Week	Last Year
Average price of 20 representative railway stocks .....	88.91	84.69	77.65
Average price of 20 representative railway bonds .....	94.32	95.24	89.99

## Railway Officers

### Executive

**William J. Manley** has been appointed assistant to the president of the Pittsburgh & West Virginia and the West Side Belt, with headquarters at Cleveland, Ohio.

**W. C. Hurst**, formerly vice-president and general manager of the Chicago, Peoria & St. Louis, has been appointed senior vice-president of the Springfield, Havana & Peoria, the new company which took over the northern half of the C. P. & St. L., with headquarters at Springfield, Ill. **Maurice Dailey** has been appointed vice-president in charge of operation, with headquarters at Springfield.

**Fitzgerald Hall**, general counsel of the Nashville, Chattanooga & St. Louis, with headquarters at Nashville, Tenn., has been promoted to vice-president and general counsel, with

the same headquarters, a newly created position. He was born on December 6, 1889, at Nashville and graduated from Vanderbilt University in 1907. After graduation he practiced law for a year and in 1914 was appointed assistant United States district attorney at Nashville. Mr. Hall entered railway service in May, 1915, as assistant general counsel of the Nashville, Chattanooga & St. Louis. On January 1, 1918, he was appointed general solicitor for the United States Railroad Administration, with jurisdiction over



F. Hall

both the Nashville, Chattanooga & St. Louis and the Tennessee Central, and upon the termination of federal control on March 1, 1920, was appointed general counsel of the former road. He held that position until his recent promotion to vice-president and general counsel.

### Financial, Legal and Accounting

**J. L. Rice** has been appointed general attorney of the Colorado & Southern and attorney in the Colorado district for the Chicago, Burlington & Quincy, with headquarters at Denver, Colo., succeeding **J. H. Barwise, Jr.**, who has resigned. Mr. Barwise will continue his connection as general solicitor with the Ft. Worth & Denver City and the Wichita Valley, with headquarters at Ft. Worth, Tex. **J. Q. Dier** has been appointed assistant general attorney of the Colorado & Southern, with headquarters at Denver.

### Operating

**W. H. Sullivan**, who has been promoted to general superintendent of the New York Central, with headquarters at Chicago, was born on December 29, 1871, at Geneva, Ohio, and entered railway service as a call boy and telegraph operator on the Lake Shore & Michigan Southern, now a part of the New York Central, in December, 1890. He later served as yard clerk, locomotive fireman, and freight brakeman and special clerk to the superintendent, and in 1897 was promoted to yard master at Buffalo, N. Y. Mr. Sullivan was transferred to Ashtabula, Ohio, in 1902, and remained there until October, 1912, when he was promoted to train master, with headquarters at Chicago. He was transferred to the Toledo division in December of that year and in January, 1916, was transferred

to the Cleveland terminal. He was promoted to assistant superintendent of the Erie division in January, 1917, and was transferred to the Franklin division in June of that year. Mr. Sullivan was promoted to superintendent of the Franklin division in January, 1918, where he remained until his recent promotion to general superintendent.

### Traffic

**R. H. Bryson** has been appointed agricultural and industrial agent of the Mississippi Central, with headquarters at Hattiesburg, Miss.

**W. S. Evans** and **W. McG. Brooks** have been appointed general agents of the Atlantic Coast Line, with headquarters, respectively, at Palmetto, Fla., and Miami.

**J. J. Grogan**, district freight agent of the Southern Pacific, with headquarters at Chicago, has been promoted to general agent, freight department, with the same headquarters.

**V. A. Wholey**, general agent of the Pittsburgh & West Virginia and the West Side Belt, has been appointed general traffic manager, with headquarters at Pittsburgh, Pa., succeeding Mr. Manley, promoted.

**R. D. Coleman**, assistant general freight agent of the St. Louis Southwestern, with headquarters at St. Louis, Mo., has resigned and his duties have been taken over by **G. S. Trowbridge**, assistant to the general traffic manager, with the same headquarters.

**C. H. Mitchell**, who has been promoted to freight traffic manager of the Chicago, Milwaukee & St. Paul, with headquarters at Chicago, entered railway service in 1901 as a stenographer in the office of the division superintendent of the Pere Marquette at Saginaw, Mich. He was later appointed telegraph operator and subsequently became traveling freight agent, with headquarters at New York. Mr. Mitchell entered the service of the Chicago, Milwaukee & St. Paul in 1906 as traveling freight agent at New York. He was later promoted to commercial agent at Buffalo, then to general agent at Duluth, Minn., and subsequently to division freight and passenger agent, with headquarters at Great Falls, Mont., and Butte. Mr. Mitchell was promoted to assistant general freight agent, with headquarters at Chicago, in 1919. Upon the termination of federal control on March 1, 1920, he was appointed general agent, with headquarters at New York, and held that position until his recent promotion to freight traffic manager.

**T. L. Hirshman**, assistant general freight agent of the St. Louis Southwestern, with headquarters at Little Rock, Ark., has been transferred to St. Louis, Mo., succeeding **W. F. Knobloch**, who was recently appointed a member of the rate committee of the Southwestern Freight Bureau at St. Louis. **R. P. Harrington** has been appointed assistant general freight agent at Little Rock in place of Mr. Hirshman.

### Engineering, Maintenance of Way and Signaling

**H. B. Holmes** has been appointed chief engineer of the Georgia & Florida, with headquarters at Augusta, Ga., succeeding **R. W. Jones, Jr.**, who has resigned to accept service with another company.

**G. A. Phillips** has been appointed engineer maintenance of way of the Lehigh Valley, succeeding **G. L. Moore**, resigned. **E. J. Cullen** has been appointed division engineer of the Seneca division, succeeding Mr. Phillips, and **H. M. Fearon** has been appointed division engineer of the Auburn division, succeeding Mr. Cullen.

### Mechanical

**F. G. Lister**, master car repairer of the Southern Pacific, with headquarters at El Paso, Tex., has been appointed chief mechanical engineer of the St. Louis-San Francisco, with headquarters at Springfield, Mo., to succeed **A. H. Oelkers**, resigned.

**L. A. Richardson**, who has been promoted to general superintendent of motive power of the Chicago, Rock Island & Pacific, with headquarters at Chicago, was born at Bucklin, Mo., in 1868, and entered railway service in 1884 as a machinist's apprentice on the Union Pacific at St. Joseph, Mo., later being promoted to roundhouse foreman and then to general foreman at the same place. After being transferred to the Oregon Short Line for a short time he entered the service of the Rock Island in 1906 as master mechanic, with headquarters at Trenton, Mo. Mr. Richardson was transferred to Chicago in 1910 where he remained until 1913, when he was promoted to mechanical superintendent, with headquarters at El Reno, Okla. He was transferred to the First district, with headquarters at Des Moines, Ia., in 1916, later being promoted to superintendent of motive power, with the same headquarters. He continued in that capacity until his recent promotion to general superintendent of motive power.



L. A. Richardson



C. H. Mitchell

### Purchasing and Stores

**Lee F. Blood** has been appointed purchasing agent of the Green Bay & Western, succeeding **H. E. Dutton**, deceased. **Thurman A. Stinson** has been appointed storekeeper, succeeding **E. C. Juley**, deceased.

### Special

**P. G. Jones** has been appointed director of development of the Mississippi Central, with headquarters at Hattiesburg, Miss.

### Obituary

**Ernest C. Juley**, general storekeeper of the Green Bay & Western, died on March 5, after a short illness.

**Harley E. Dutton**, purchasing agent of the Green Bay & Western, died recently, after many months' illness.

**Edward Posson**, who was retired as engineer of car construction of the Atchison, Topeka & Santa Fe on July 1, 1924, died on March 7.

**Robert A. Campbell**, former lieutenant governor of Missouri and at one time president of the Louisiana & Missouri River, died at St. Louis, Mo., on April 2.

**Harry Gower**, formerly freight traffic manager of the Chicago, Rock Island & Pacific, who retired in 1915, died at his home at West Palm Beach, Fla., on April 3.

**Francis E. House**, president of the Duluth & Iron Range, with headquarters at Duluth, Minn., died suddenly at Janesville, Wis., on April 3, while en route to Chicago.